BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of MAUI ELECTRIC COMPANY, LIMITED For Approval of Power Purchase Agreement for Renewable As-Available Energy and Electric Services with Moloka'i New Energy Partners, LLC.	DOCKET NO. 2018-0053

DECISION AND ORDER NO. 35609

AND

CONCURRING OPINION OF JENNIFER M. POTTER, COMMISSIONER

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DECISION AND ORDER

By this Decision and Order, the State of Hawaii Public Utilities Commission ("commission") approves, subject to the conditions stated herein, the requests set forth in MAUI ELECTRIC COMPANY, LIMITED's ("MECO" or "Maui Electric") Application[1] for approval of a Power Purchase Agreement ("PPA")[2] with Moloka'i New Energy Partners ("MNEP").[3] Specifically, the commission:

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[1]"Maui Electric Company, Limited's Application; Verification; Exhibits 1-7; and Certificate of Service," filed on March 7, 2018, ("Application").

[2]The PPA is dated January 24, 2018, and is attached to the Application as Exhibit 1.

[3]The Parties are MECO and the DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate"), an ex officio party, pursuant to Hawaii Revised Statutes ("HRS") § 269-51 and Hawaii Administrative Rules ("HAR") § 6-61-62(a). MNEP and Sust'āinable Molokai ("SM") (collectively, "Participants") were granted participant status in Order No. 35434. See Order No. 35434, "(1) GRANTING PARTICIPANT STATUS TO MOLOKA'I NEW ENERGY PARTNERS

1. Approves the PPA pursuant to HRS § 269-27.2;

2. Finds that the purchased energy charges and BESS fixed payments to be paid by MECO pursuant to the PPA are just and reasonable;

3. Finds that the purchased power arrangements under the PPA, pursuant to which MECO will purchase energy on an as-available basis from MNEP and the BESS fixed-payments paid to MNEP, are prudent and in the public interest; and

4. Authorizes MECO to include the purchased energy charges and BESS fixed payments, and related revenue taxes incurred under the PPA in and through MECO's Energy Cost Adjustment Clause ("ECAC") and Purchased Power Adjustment Clause ("PPAC"), as applicable, to the extent such costs are not included in base rates.

The commission's approval is subject to the following modifications and conditions:

1. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of its calculation of the final costs and final expected return, along with the documentation to support those calculations, no later than sixty (60) days after the Commercial Operations Date of the Facility.

2. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of invoices related to the engineering, procurement, construction, and

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AND SUST'ĀINABLE MOLOKAI; (2) ADOPTING A PROCEDURAL ORDER; AND (3) AMENDING PROTECTIVE ORDER NO. 35368," filed on May 4, 2018 ("Order No. 35434").

maintenance associated with the Facility, including a fully executed Lease, no later than sixty (60) days after the Commercial Operations Date of the Facility.

3. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of its annual income statements or annual results of operations related to the Facility that will allow the Commission and Consumer Advocate to evaluate the comparability of the project's actual results to MECO's analysis, no later than March 31 of each year, for the previous calendar year.

4. MECO shall:

A. Take reasonable steps to maximize utilization of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers; and

B. File with the commission and Consumer Advocate quarterly reports that support the finding that MECO is taking reasonable efforts to take advantage of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers.

5. The PPA shall be modified to ensure that the liquidated damages associated with the BESS fully offset any BESS Services Fixed Payment, such that if the BESS is unavailable, and such failure is not due to a force majeure event, MNEP shall pay as additional liquidated damages the difference between any BESS

Services Fixed Payment and any applicable liquidated damages related to the BESS Services.

6. The evergreen provision of the PPA shall be subject to the following written notice requirements:

A. MECO shall file written notice with the commission and the Consumer Advocate at least one year prior to the 90-day advance written notice provision by which the contracting parties may terminate the PPA.

B. MECO, in its written notice, shall: (A) state whether it intends to extend the Initial Term of the PPA; and if applicable (B) provide the basis for said extension.

I.

APPLICATION AND PROPOSED PROJECT

On March 7, 2018, MECO filed an application requesting approval of a Power Purchase Agreement with MNEP for Renewable As-Available Energy and Electric Services relating to a 4.88-megawatt ("MW") photovoltaic project, coupled with a 3 MW/15MW-hour ("MWh") battery energy storage system ("BESS") with a maximum allowed export of 2.64 MW, proposed to be located in Kaunakakai, on the island of Molokai ("Project" or "Facility").[4] The Project, to be built, owned, and operated by MNEP, would be

[4]See Application at 1.

located "on vacant, industrial land . . . adjacent to the Company's Pala'au generation facility."[5] MECO asserts that the Project "represents an important step forward in the Company's plan to integrate higher levels of stable, cost-effective utility scale renewable generation for the island of Moloka'i, as well as contributing approximately 45% to the Renewable Portfolio Standard ('RPS') for Moloka'i island."[6]

MECO states that the Project will provide "time-shifted energy and other electrical services to [MECO's] Moloka'i grid at a levelized cost of approximately $0.18/kWh."[7] MECO represents that the immediate savings for a typical residential customer on Molokai, as a result of the Project, is expected to be "$4.63 in 2019 and $35.92 in 2024 on the customer's monthly electric bill."[8]

According to MECO, the Project will "produce renewable energy and displace fossil fuel at a lower cost to customers[,]"[9] resulting in "a total net present value avoided fuel cost of approximately $34.5 million."[10] In addition, the Project will

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[5]Application at 8.

[6]Application at 2.

[7]Application at 2.

[8]Application at 15.

[9]Application at 8.

[10]Application at 15.

"offset evening peak and overnight customer loads"[11] and provide grid services, thereby "allow[ing] [MECO's] grid operators to react to contingency events and stabilize the grid."[12] MECO states that the Project "will not impact the expected growth of distributed energy resources (rooftop solar), since the BESS will be able to time-shift PV energy."[13]

MECO represents that both MECO and MNEP have conducted community outreach on Molokai[14] and "recognize the importance of community involvement in shaping Moloka'i's renewable energy future and accordingly, that community input has been an integral part of the development of this Project."[15] In that regard, MECO states that the PPA includes provisions requiring MNEP's ongoing "community outreach regarding the Project[.]"[16] The PPA also

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[11]Application at 8.

[12]Application at 8. More specifically, MECO identifies the following grid services: "inertial fast frequency response," "contingency reserve up to 600 kWh," "up to 1.980 MVAR for power factor correction and voltage support[,]" and "black start capability." Id.

[13]Application at 2.

[14]Application at 12.

[15]Application at 3; see also Exhibit 5.

[16]See Application at 12; PPA Article 29.27 at 107-09 ("Community Relations"); see also Exhibit 5. Article 29.27(A) provides that MECO may: submit public comments from MNEP's October 2, 2017 community meeting in its Application to the PUC; solicit additional public comments after the Application is filed, and file such public comments in the docket; and file public comments

includes a provision stating that, if a community-controlled not-for-profit corporation, or a similar entity, proposes to acquire the Project at any time after the fifth anniversary of the in-service date, such proposal shall be considered in good faith ("Provision Requiring Good Faith Consideration of Community Ownership Proposal").[17]

MECO seeks approval pursuant to HRS § 269-27.2 and HAR Chapter 6-74.[18] MECO specifically requests that the commission:

1. Approve the PPA;

2. Find that the purchased energy charges and BESS fixed payments to be paid by MECO pursuant to the PPA are just and reasonable;

3. Find that the purchased power arrangements under the PPA, pursuant to which MECO will purchase energy on an

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in the docket from any future community meetings held by MNEP. Article 29.27(B) provides, among other things, that MNEP must formulate and implement a community outreach plan and provide a copy of the plan to MECO upon finalization, and before the plan is implemented. PPA at 108; see also Exhibit 5 at 5 (listing MNEP's community outreach plan).

[17]See PPA, Article 12.10(B) at 58; Application at 12-13.

[18]Application at 4.

as-available basis from MNEP and the BESS fixed-payments paid to MNEP, are prudent and in the public interest;

4. Authorize MECO to include the purchased energy charges and BESS fixed payments, and related revenue taxes that MECO includes under the PPA in and through MECO's ECAC and MECO's PPAC, as may be applicable, to the extent such costs are not included in base rates; and

5. Grant such other relief as may be just and reasonable under the circumstances.[19]

MECO requests a decision and order by July 31, 2018. MECO explains that "the negotiated PPA price is based on MNEP's ability to obtain New Market Tax Credits ('NMTC')."[20] MECO states that "[t]he agreement for the NMTC [ ] must be exercised by the end of August 2018," and that "[t]he issuance of a [c]ommission decision and order by July 31, 2018 would allow sufficient time for the project financing to close, and for MNEP to obtain the NMTC allocation."[21]

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[19]Application at 3, 20.

[20]Application at 2. MECO further explains that the "Project was able to qualify for a NMTC allocation in the amount of approximately $17 million from the U.S. Department of Treasury, as selected by the Community Development Entity Punawai 'O Pu'uhonua." Id. at 16. "The NMTC could provide nearly 20% of the equity investment for the Project, and MNEP has indicated that the Project is not financially viable without the NMTC." Id.

[21]Application at 16.

II.

RELEVANT BACKGROUND AND PROCEDURAL HISTORY

On May 4, 2018, the commission issued Order No. 35434, in which the commission adopted a procedural order, including a statement of issues, for the proceedings, and granted participant status to MNEP and SM.[22]

The commission adopted the following Statement of Issues for the proceedings:

1. Whether MECO has met its burden of proof in support of its request for approval of the PPA for Renewable As-Available Energy and Electric Services between MECO and MNEP, dated January 24, 2018, for a 4.88-MW photovoltaic project, coupled with a 3 MW/15MWh BESS with a maximum allowed export of 2.64 MW, proposed to be located in Kaunakakai, on the island of Molokai.

   a. Whether the purchased energy charges and BESS fixed payments to be paid by MECO pursuant to the PPA are just and reasonable.

   b. Whether MECO's purchased power arrangements under the PPA are prudent and in the public interest.

2. Whether MECO has met its burden of proof in support of its request to include the purchased energy charges, BESS fixed payments, and related revenue taxes that MECO incurs under the PPA in and through MECO's ECAC and MECO's PPAC, as may be applicable,

[22]MNEP filed its Motion to Participate on March 23, 2018. "Moloka'i New Energy Partners LLC's Motion to Participate; Affidavit of Charles J. Magolske; and Certificate of Service," filed on March 23, 2018. SM filed its "Motion to Intervene or Participate" on March 27, 2018. "Sust'āinable Molokai's Motion to Intervene or Participate; Memorandum in Support; Declaration of Emillia Noordhoek; and Certificate of Service," filed on March 27, 2018.

to the extent such costs are not included in base rates.[23]

In granting participant status to MNEP and SM, the commission limited the scope of MNEP's participation to Issue 1;[24] and limited the scope of SM's participation to the subjects of community outreach, the potential for community ownership, and the potential impact of the Project on SM's work related to energy and sustainability issues on Molokai, as these subjects relate to Issue 1.[25]

The Parties and Participants conducted discovery throughout April, May, and June 2018. The commission issued information requests to MECO on June 14, 2018, and July 17, 2018.

Members of the public, including a number of Molokai residents, filed comments in the docket between March and June 2018.

On June 22, 2018, the Consumer Advocate, MNEP, and SM filed their respective Statements of Position.

On July 2, 2018, MECO filed its Reply Statement of Position.

[23]See Order No. 35434 at 38-39.

[24]Order No. 35434 at 27, 48.

[25]Order No. 35434 at 35, 48.

III.

THE PPA

A.

The Contracting Parties

MECO is an operating public utility engaged in the production, purchase, transmission, distribution, and sale of electricity on the island of Maui; the production, transmission, distribution, and sale of electricity on the island of Molokai; and the production, purchase, distribution, and sale of electricity on the island of Lanai.[26]

MNEP is a Hawaii limited liability company that is 100% owned by Half Moon Ventures, LLC ("HMV"). HMV is a Delaware company. MNEP's and HMV's principal place of business is located in Chicago, Illinois.[27] MNEP states that it "has a strong track record of financing renewable energy projects" and "currently operates projects in Rhode Island, New York, Ohio, Wisconsin, Indiana and Hawai'i."[28]

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[26]Application at 4.

[27]Application at 7.

[28]Application at 7.

B.

New Generation and Storage Facility

Pursuant to the PPA, the Facility is comprised of a solar PV system consisting of solar PV panels and eight central inverters rated at 610 kVA each, or a total of 4.88MW AC; and a 3 MW/15MWh BESS consisting of three 1.25 MVA inverters coupled to fifteen 1 MWh Li-ion batteries.[29] The allowed export capacity of the Facility is 2.64 MW.[30] The Facility, located adjacent to MECO's Pala'au generation facility on vacant, industrial land leased by MNEP, identified by Tax Map Key No. (2) 5-2-011-029, will interconnect to MECO's 12 kV distribution system fed out of the Pala'au Substation.[31]

Pursuant to the PPA, the energy produced will be provided on an as-available basis, providing both real-time PV energy and time-shifted PV energy from the BESS.[32] According to MECO, "[t]he time-shifted energy will offset evening peak and overnight customer loads, which are currently served by the diesel generators at Maui Electric's Pala'au generating facility."[33] In addition,

[29]Application at 7.

[30]Application at 8.

[31]Application at 8.

[32]Application at 8.

[33]Application at 8.

the BESS will "provide "grid services such as (i) inertial fast frequency response, (ii) contingency reserve up to 600 kWh, (iii) up to 1.980 MVAR for power factor correction and voltage support, and (iv) black start capability."[34]

MECO and MNEP executed the PPA to govern the purchase from MNEP of as-available energy and BESS Services from the Facility, subject to the terms of the PPA.[35]

MECO represents that the Project will be in-service by the second quarter of 2019.[36]

C.

Key Terms and Conditions of the PPA

The PPA is included as Exhibit 1 to MECO's Application.[37] The material terms of the PPA are provided below.

1. Term. The Initial Term of the PPA commences at the Execution Date of the PPA and remains in effect for twenty-two (22) years following the Commercial Operations Date, unless terminated

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[34]Application at 8; PPA at Attachment B-2.

[35]Application at 9-10.

[36]Application at 3.

[37]See Application, Exhibit 1 (the "PPA"). For ease of reference, this Decision and Order shall cite to the PPA by its internal page numbers, found at the bottom of the page, and not to the "Exhibit 1" page numbers found at the top right of the page.

sooner pursuant to the PPA.[38] When the Initial Term expires, the Agreement automatically continues until terminated by either contracting Party,[39] or until the expiration of an additional period as agreed to in writing by the contracting Parties (i.e., "Extended Term" or "evergreen provision").[40] During the Extended Term, either contracting Party may terminate the PPA at any time upon not less than ninety days written notice to the other contracting Party.[41]

2. Energy Rate. The energy rate pursuant to the PPA is comprised of (1) Real-Time PV Energy rates; (2) a Time-Shifted PV Energy rate; and (3) a monthly BESS Services Payment.[42]

Real-Time PV Energy is energy generated by the Facility that is directly accepted to the grid, without being stored in the BESS.[43] Real-Time PV Energy has a two-tier rate structure, with an Initial Energy Rate of $0.05211/kWh and Post Initial Energy

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[38]See Application at 10; PPA, Article 12.1 at 53.

[39]When discussing the terms of the PPA, MECO and MNEP will be referred to as the "contracting Party," individually, or "contracting Parties," collectively, as distinct from the Parties to this docket.

[40]See Application at 10; PPA, Article 12.1 at 53.

[41]PPA, Article 12.1 at 53.

[42]PPA at 4 ("BESS Services Payment" definition), Attachment J.

[43]Application at 10; PPA at 25 ("Time-Shifted PV Energy" definition), J-1-1 (Table J-1).

Rate of \$0.02246/kWh.[44] After the Defined Annual Amount of Energy (at the Initial Energy Rate) has been purchased by MECO, the Post Initial Energy Rate goes into effect for the remainder of the Contract Year.[45]

The energy rates for Real-Time PV Energy are subject to 1.2% escalation on the first day of each Contract Year.[46]

Time-Shifted PV Energy is energy generated by the Facility that is stored in the BESS before being exported to the grid.[47] The energy rate for Time-Shifted PV Energy is \$0.05211/kWh[48] and is subject to 1.2% escalation on the first day of each Contract Year.[49]

The BESS Services Payment is \$101,083.50/month, or \$1,213,002/year for Contract Year 1.[50] The BESS Services Payment escalates yearly pursuant to Table J-3.[51]

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[44]Application at 10; PPA at J-1-1 (Table J-1).

[45]Application at 10; PPA at J-1-1 (Table J-2). For contract year 1, the Defined Annual Amount of Energy is 4,717,500 kWh. See PPA at J-1-1 (Table J-2).

[46]Application at 10.

[47]Application at 10; PPA at 21 ("Real-Time PV Energy" definition).

[48]Application at 10; PPA at J-1-1 (Table J-1).

[49]Application at 10; PPA at J-1-1 (Table J-1).

[50]Application at 10; PPA at J-1-2 (Table J-3).

[51]PPA at J-1-2 (Table J-3).

MECO represents that "[b]ased on the anticipated amount of energy purchased by the Company," the PPA energy rate "equates to a levelized price of approximately $0.18/kWh."[52]

3. Liquidated Damages - BESS Services. The BESS Services are described in Attachment B-2 of the PPA.[53] The PPA provides for liquidated damages under two types of circumstances: (1) if the BESS does not provide Critical BESS Services, which relate to inertial fast frequency response and contingency reserve;[54] and (2) if the BESS Services Availability Factor falls below 98%.[55]

4. Interconnection and Supplemental IRS. MECO filed the Interconnection Requirements Study ("IRS") in the docket on June 7, 2018.[56]

MECO explains that during the PPA negotiations, it determined a Supplemental Interconnection Requirement Study ("Supplemental IRS") "was necessary in order to determine the protection scheme for [MECO's] Pala'au generating facility" "as

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[52]Application at 10.

[53]See PPA at A-3, B-2-1 to B-2-7.
[54]See Application at 12; PPA at Article 2.2(D)(1) at 28-30.

[55]See Application at 12; PPA at Article 2.2(D)(2) at 30-31.

[56]"Interconnection Requirements Study for Molokai PV and Battery Energy Storage Facility," dated May 12, 2017, filed on June 7, 2018.

certain attributes of the proposed project changed from the time the IRS was completed[.]"[57] "[T]he [contracting] Parties agreed to execute the PPA prior to the completion of the Supplemental IRS[,]" which is expected to be completed on July 31, 2018, and amend the PPA as needed, "to reflect the results of the Supplemental IRS[.]"[58] While MECO represents that the pricing in the PPA "will not change due to the results of the Supplemental IRS[,]"[59] if MNEP "is dissatisfied with the results of the Supplemental IRS," MNEP has the option to declare the PPA "null and void."[60] In addition, if the Supplemental Interconnection Requirements Amendment is not executed by the applicable deadline, either MECO or MNEP may declare the PPA null and void.[61]

MECO will own, operate, and maintain all Interconnection Facilities required to interconnect the Facility to MECO's system at 12.47 kV, up to the Point of Interconnection (the "Company-owned Interconnection Facilities").[62] MNEP is required to pay for all

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[57]Application at 11.

[58]Application at 11. MECO further explains that it intends to submit the Supplemental Interconnection Requirements Amendment to the commission as an informational filing. Id.

[59]Application at 11.

[60]PPA, Article 12.4(B) at 55; see Application at 11.

[61]PPA at Section 12.4(A) at 55; see Application at 11.

[62]PPA, Attachment G, Article 1(a) at G-1. Prior to the Transfer Date, MNEP shall operate and maintain the Company-Owned

costs related to the Company-Owned Interconnection Facilities.[63] The Total Estimated Interconnection Cost is $1,380,000.[64]

5. Community Relations. Pursuant to the PPA, MECO may solicit and file public comments in the instant docket with regards to the Project.[65] In addition, the PPA requires that MNEP formulate and implement a community outreach plan and provide a copy of the plan to MECO upon finalization, and before the plan is implemented.[66]

6. MECO's Option to Purchase the Facility and Right of First Negotiation. Pursuant to the PPA, MECO has the right to first negotiation prior to the end of the Term; and the option to purchase the Facility, or certain portions of the Facility, at the

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Interconnection Facilities. PPA, Attachment G, Article 4(a) at G-10; see PPA at 25 (defining Transfer Date). On or after the Transfer Date, MECO shall own, operate, and maintain the Company-Owned Interconnection Facilities, and shall bill MNEP monthly for actual and verifiable costs incurred, to the extent not covered by insurance. See PPA, Attachment G, Article 4 (b) & (c), at G-10.

[63]See PPA, Attachment G, Section 1(d) at G-1 to G-2, Sections 3 and 4 at G-7 to G-10.

[64]PPA, Attachment G, Article 3(a)(ii) at G-8.

[65]PPA, Article 29.27(A) at 107-08; see Application at 12.

[66]PPA, Article 29.27(B) at 108; see Application at 12; Exhibit 5 at 5 (MNEP's community outreach plan).

end of the Term.[67] Any sale of the Facility to MECO is subject to commission approval.[68]

7. Good Faith Consideration of Community Ownership Proposal. Pursuant to the PPA, if a community-controlled not-for-profit corporation, or a similar entity, proposes to acquire the Project at any time after the fifth anniversary of the in-service date, such proposal shall be considered in good faith.[69]

8. Governmental Approvals for Facility and Compliance with Laws. MNEP is required to obtain, at its own expense, any and all governmental approvals required for construction, ownership, operation, and maintenance of the Facility and the interconnection of the Facility to MECO's system.[70] In addition, MNEP is required to install, operate, and maintain the Facility safely and in compliance with all applicable laws.[71]

9. Indemnification, Insurance, and Credit Assurance and Security. MECO represents that "[t]he PPA contains [ ] mutual indemnification provisions by and between the [contracting]

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[67]PPA, Article Section 12.10(A) at 5, Article 19.1 at 78, Attachment P.

[68]See PPA, Attachment P.

[69]See PPA, Article 12.10(B) at 58-59; Application at 12-13.

[70]PPA, Article 11.1 at 52.

[71]PPA, Article 11.4 at 52.

Parties that protect [MECO] and its successors, permitted assigns, affiliates, controlling persons, directors, officers, employees, agents, subcontractors and their employees, arising out of the PPA."[72]

Pursuant to the PPA, MNEP is required to acquire and maintain, at its own expense, specified minimum insurance coverage.[73]

Pursuant to Article 14 of the PPA, Credit Assurance and Security, MNEP is required to maintain (1) a Development Period Security of $50/kW, or $132,000, to ensure it meets the Guaranteed Commercial Operations Date; and (2) an Operating Period Security of $75/kW or $198,000, to ensure its performance of its obligations pursuant to the PPA.[74]

10. Termination Rights. MECO and MNEP agree to certain conditions that trigger termination rights, or trigger one or both contracting Parties' right to declare the PPA null and void.[75]

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[72]Application at 13; see PPA, Article 17 at 71-75.

[73]See Application at 13; PPA, Article 18 at 76-79, Attachment R.

[74]See Application at 13-14; PPA, Article 14.2 at 62, Article 14.4 at 63.

[75]See PPA, Article 12 at 53-58, Article 15 at 66-70.

IV.

PARTICIPANT/PARTY POSITIONS AND PUBLIC COMMENTS

A.

MNEP's Statement of Position

MNEP supports approval of the requests in MECO's Application. MNEP contends that the levelized price of the PPA, $0.18/kWh "is just and reasonable as it provides a significant cost savings to ratepayers and the Project provides extensive services that are necessary to address grid stabilization and reliability issues on Moloka'i."[76] MNEP highlights that the Project "will result in significant immediate energy savings" and that the savings will increase through the PPA term.[77] With regards to grid services, MNEP argues that although the inverters planned for use in the Project "are expensive, resulting in higher costs and a higher cost of energy, they are necessary to address grid reliability issues[,]" which MNEP represents are a concern on Molokai.[78] MNEP characterizes the project as "not only a contract for the provision of power, but also [a contract] for the

[76]MNEP's SOP at 5.

[77]MNEP's SOP at 5.

[78]MNEP's SOP at 7; see id. at 5-7

installation of infrastructure to remedy shortcomings of the grid."[79]

MNEP cautions against comparing the Project with (1) the price of other solar plus storage projects in Hawaii; or (2) the price of projects submitted in response to the Hawaiian Electric Companies' Request for Proposals for Oahu, Maui, and Hawaii in Docket No. 2017-0352.[80] While MNEP acknowledges that the pricing for the Project is higher than other projects, MNEP argues that the costs are nonetheless reasonable because: (1) the Project includes grid services that are not provided or not needed in other projects;[81] (2) MNEP has assumed more risk and has higher costs than developers of other projects;[82] and (3) projects on Molokai,

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[79]MNEP's SOP at 7.

[80]In re Public Util. Comm'n, Docket No. 2017-0352, To Institute A Proceeding Relating To A Competitive Bidding Process To Acquire Dispatchable And Renewable Generation, opened on October 6, 2017.

[81]MNEP's SOP at 10 ("the PPA for this Project provides additional ancillary services that have not, to HMV's knowledge, been provided in prior Hawaii" PPAs), 11 ("None of the islands for which the RFPs were issued are facing the grid reliability or stabilization issues that are present on Moloka'i" and thus "do not require costly inverters and other specialized technology, increased IRS costs, or more costly design and engineering services, which are required to address Moloka'i's grid issues.").

[82]MNEP's SOP at 10-11 (providing examples of factors in place in lower cost PPAs on Kauai, including lower construction and interconnection costs, a cap on uncompensated curtailment, and lower risk profiles), 12 (stating that "curtailment of the facility is not a risk for the bidders" under the new model PPA).

including this Project, are more expensive because of their small scale, which is due to Molokai's low energy demand.[83]

MNEP additionally states that the estimated levelized price of $0.18/kWh "does not need to be this high" because the price is based on purchased power estimates over the PPA term.[84] Accordingly, the levelized price estimate could go down, depending on how MECO operates the grid (i.e., operates its generator(s) and manages its load) and the amount of power MECO purchases.[85]

In further support, MNEP asserts that: (1) it is unlikely that either the NMTC or the 30% Investment Tax Credit ("ITC") will be available for future projects on Molokai, making subsequent PPAs likely to be higher in price;[86] and (2) its projected internal rate of return is reasonable, and may be reduced

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[83]MNEP's SOP at 10-11 ("the much larger projects on Kauai enjoy a scale advantage, . . . the benefit of scale is not able to be utilized on Moloka'i"), 12 ("the RFP projects will be larger than this Project.")

[84]MNEP's SOP at 13.

[85]MNEP's SOP at 13-14.

[86]MNEP's SOP at 8-9. MNEP states that it is unlikely that future projects on Molokai will qualify for the NMTC based on changed census data for the island. Id. at 8 (citing MNEP's Response to CA/MNEP-IR-9 (Baker Tilly Letter)). MNEP also states that "the ITC is currently at 30% of qualifying capital investment so long as construction has commenced by 2019. However, the ITC steps down to 26 percent in 2020, 22 percent in 2021 and 10% in 2021." Id. at 9.

if MNEP cannot mitigate rising costs related to the solar panels, steel, and batteries.[87]

MNEP additionally contends that the project provides the following benefits due to: (1) inclusion of "a purchase option for a Moloka'i non-profit organization[;]"[88] (2) its contribution to the RPS for Molokai and "other environmental and energy security benefits[;]"[89] and (3) the low development risk based on the experience of the development team,[90] substantial progress to date completing development activities,[91] and location of the Project, in an area with high solar radiation, on industrial land, close to the Pala'au plant.[92]

With regards to the community, MNEP asserts that it used community feedback to develop a project that is generally supported by the Molokai community. MNEP details efforts to solicit input from the community, and provides examples of decisions made in

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[87]MNEP's SOP at 9 (stating that its "rate of return did not take into account the recent 30% solar panel import duty, rising steel costs due to the new steel import duty, or the rising battery costs due to the increase in lithium and cobalt prices.").

[88]MNEP's SOP at 14 (formatting altered).

[89]MNEP's SOP at 15 (formatting altered).

[90]MNEP's SOP at 15-16.

[91]MNEP's SOP at 16.

[92]MNEP's SOP at 16-17.

response to community concerns (i.e., the location of the Project, and the BESS design and functions).[93] MNEP additionally contends that the Project is consistent with the community's goals because of support for: achieving a 100% renewable energy future; using energy generated on Molokai on Molokai (i.e., not exporting the energy to another island); reducing dependence on oil; and moving to cleaner energy sources.[94]

MNEP represents that "SM was offered the opportunity to replace the investor of the Project at the same investment level, and be the owner of the Facility;[]" an offer which was not accepted.[95] In addition, MNEP states that it was surprised that in April 2018, it became aware "that [SM] wanted to be granted a portion of free ownership" which MNEP could not grant "at such time[.]"[96] MNEP represents that in order to have a financeable project, granting a portion of ownership to SM or another community organization would require an increase in the energy price.[97]

Lastly, with regards to community benefits, MNEP states: (1) that it "intend[s to] participate in environmental and

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[93]MNEP's SOP at 17-18, 19.

[94]See MNEP's SOP at 19.

[95]MNEP's SOP at 14.

[96]MNEP's SOP at 14.

[97]MNEP's SOP at 14.

sustainability initiatives in the community as well as educational opportunities in the areas of sustainability and clean energy[;]"[98] and (2) "to the extent we are successful reducing the costs to build the project, we will be able to continue to donate to schools and other non-profit activities as we have in the past."[99] MNEP also represents that it can re-evaluate whether it can offer additional community benefits after "review[ing] the upcoming bids and can determine whether the budget will allow for this."[100]

B.

SM's Statement of Position

SM describes itself as a "a local, grassroots group formed to inspire youth and all Molokai residents to work toward a more sustainable future for [the] island"[101] and states that its "mission requires that [SM] ensure that energy developments on Molokai promote [the] community's health, aesthetic, and recreational interests."[102] SM represents that it "works with all

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[98]MNEP's Response to CA/MNEP-SIR.7.b.2.

[99]MNEP's Response to CA/MNEP-SIR.7.b.2.

[100]MNEP's Response to CA/MNEP-IR-12.d. The commission notes that MNEP makes additional statements in the record regarding the community benefits offered by the Project. The commission expects that MNEP will follow through on these representations.

[101]SM's Motion to Intervene at 2.

[102]SM's Motion to Intervene at 2-3.

members of the community," "[o]ver the past 7 years [it] has engaged with over 1[,]000 island residents through the Hui Up and Mobile Market projects,"[103] and has engaged over 1,350 residents on "energy efficiency and food security programs."[104] SM represents that it "researched and published a Molokai Energy Assessment in 2014."[105]

With regards to this Project, SM represents that it gathered input from the community and educated the community on community benefits,[106] "met with MNEP representatives approximately 3-5 times,"[107] and discussed a community engagement plan and benefits package.[108]

SM states that, although it "appreciates many efforts related to the proposal," and "worked for several years to find ways to support this project,"[109] it is in opposition to the Project.[110] Overall, SM contends that the Project provides

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[103]SM's Response to CA/SM-IR-5.

[104]SM's Response to CA/SM-IR-5.b.

[105]SM's Response to CA/SM-IR-3.a.; see "Sustainable Molokai Energy Assessment: a project of Molokai-pedia," dated May 2014, and filed on May 30, 2018, in response to the Consumer Advocate's Information Requests.

[106]SM's Response to CA/SM-IR-6.d.

[107]SM's Response to CA/SM-IR-1.

[108]SM's Response to CA/SM-IR-1.

[109]SM's SOP at 2.

[110]SM's SOP at 1.

"no solid community benefits, offers insufficient savings for Molokai ratepayers, and provides little potential for community ownership, job creation, or other ways of more deeply engaging the community in the island's energy transition."[111]

SM characterizes the Project as "continu[ing] a model of investor-driven energy investments and decisions, with little community stake in the planning, design, ownership, or benefits[.]"[112] In this regard, SM states that the process did not include sufficient community engagement; discussions with the community do not "appear to have substantially influenced the proposed PPA[;]"[113] "community outreach was focused on the time period before the PPA was negotiated[;]"[114] and the "terms of the PPA were not the subject of community outreach."[115] In fact, SM states that it "was led to believe that formal discussion could occur into the future and was surprised at the announcement of the PPA."[116]

In contrast to an "investor-driven energy investments and decisions model[,]" SM suggests that "Community Energy"

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[111]SM's SOP at 3.

[112]SM's SOP at 2.

[113]SM's SOP at 4.

[114]SM's SOP at 4.

[115]SM's SOP at 4.

[116]SM's Response to CA/SM-IR-3.d.

provides an alternative. SM explains that Community Energy "often reflects the following priorities: maximize local ownership and decision making; generate local jobs; use local resources efficiently and sustainably; match energy production to local energy needs and circumstances; help address climate change and other environmental impacts; and share risks and benefits equitably."[117]

In its SOP, SM discusses a number of Community Energy based concepts that could have been included or incorporated into the Project:

1. Funding or in-kind resources for the community to prepare a renewable energy master plan, a process that would include community vetting and approval;[118]

2. "Community equity sharing, such as a 1% to 4% profit-sharing plan[,]"[119] which "would help create a long-term

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[117]SM's SOP at 4 (formatting altered). The commission notes that SM provides links and/or references to a number of resources discussing Community Energy and related concepts, as well as models. See SM's Responses to CA/SM-IR-6.b. & c., CA/SM-SIR-1, CA/SM-SIR-3.b.

[118]SM's SOP at 4; see "Community Energy Masterplan Proposal 2018," filed on May 30, 2018, in response to the Consumer Advocate's Information Requests.

[119]SM's SOP at 4.

funding source to help build community capacity and to support energy and efficiency projects on Molokai."[120]

3. "Electric vehicle charging stations and incentives for local residents and businesses" to utilize the solar power from the project to reduce the cost of transportation fuel[;]"[121]

4. Support for an energy academy on Molokai, which would serve as "a hub of learning and local innovation[,]" "would help build capacity, and kickstart more substantial job creation than the proposed project's potential for minimal hourly wage positions and landscaping contracts."[122]

SM represents that it has discussed Community Energy ideas with MECO and MNEP[123] and "identified a variety of potential community benefits formulations, verbally during meetings and over phone calls."[124] SM states that it "does not know why the ideas were not formally considered out as community benefits by MNEP or MECO but seemed to be wholly dismissed."[125]

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[120]SM's SOP at 4-5; see id. at 7 (detailing a scenario in which partial profit sharing could provide financial support to community members while also promoting collaboration between the community and developer).

[121]SM's SOP at 5.

[122]SM's SOP at 5.

[123]SM's SOP at 4.

[124]SM's Response to CA/SM-IR-3.d.

[125]SM's Response to CA/SM-IR-3.d.

SM additionally provides input on what "meaningful community engagement" should look like, stating that "the planning, design, ownership, and benefits of the project must engage the community *much more deeply* [than was done for this Project], and must do so *before* terms are submitted to the PUC for approval.[126] SM additionally cautions that "PPAs that fail to incorporate this type of meaningful community engagement will continue to face community opposition[.]"[127]

With regards to Article 12.10, SM questions both the enforceability of the provision and the prospect of the community making a proposal. SM states that the provision does not create a "real opportunity for community ownership"[128] or "provide any real benefit to the community[;]"[129] and "does not appear to create any real rights or opportunities.[130] "[W]ithout community capacity building [], the likelihood of receiving such a community [ownership] proposal is very very small."[131]

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[126]SM's SOP at 7-8.

[127]SM's SOP at 7-8.

[128]SM's SOP at 6 (formatting altered).

[129]SM's SOP at 7.

[130]SM's SOP at 6.

[131]SM's SOP at 7.

C.

The Consumer Advocate's Statement of Position

Although the Consumer Advocate raises concerns related to the cost of the Project,[132] the absence of competitive bidding,[133] and the pricing structure of the PPA,[134] the Consumer Advocate does not object to the commission approving MECO's requests, provided that the commission condition its approval on six conditions, discussed below.

1.

Whether the Purchased Energy Charges and BESS Fixed Payments are Just and Reasonable

Due to the fact that the Project was not competitively bid, the Consumer Advocate considered several factors, including projected bill savings, pricing and costs of other PV/BESS projects, and tax credits, "to determine whether the proposed energy charges and BESS fixed payments are just and reasonable[.]"[135]

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[132]Consumer Advocate's SOP at 10-11, 14-20.

[133]Consumer Advocate's SOP at 10-11, 15. The Consumer Advocate states that it has concerns "regarding committing a significant portion of Molokai's generating capacity for an extended period of time to a contract that was not competitively bid." Consumer Advocate's SOP at 10.

[134]Consumer Advocate's SOP at 21-24.

[135]Consumer Advocate's SOP at 11.

The Consumer Advocate questions "whether a competitive bid process could have resulted in a lower cost project[,]"[136] and "whether the overall customer impact for the project could be improved."[137] With regards to MECO's scenarios illustrating monthly bill savings, the Consumer Advocate highlights a general shift towards lower cost resources, and points out that the scenarios utilize (costly) biofuels.[138] Ultimately, however, the Consumer Advocate focuses on "the significant bill savings projected across various scenarios under [MECO's] production simulations" in support of its position.[139]

Turning to the prices of other solar plus storage projects, the Consumer Advocate acknowledges "that direct 'apples-to-apples' comparisons may not be feasible due to various factors."[140] Even so, the Consumer Advocate questions "the Project's relatively high costs,"[141] MECO's failure to conduct an independent assessment of the costs in the pro forma,[142] and MECO's

[136]Consumer Advocate's SOP at 10.

[137]Consumer Advocate's SOP at 11.

[138]Consumer Advocate's SOP at 12-15.

[139]Consumer Advocate's SOP at 11.

[140]Consumer Advocate's SOP at 19.

[141]Consumer Advocate's SOP at 18.

[142]Consumer Advocate's SOP at 17.

reliance on MNEP's stated internal rate of return.[143] The Consumer Advocate recommends various reporting requirements (discussed below) to mitigate its concerns.

The Consumer Advocate additionally states its expectations for how electric utilities and the commission will approach subsequent applications, stating:

> 1. "[T]he Consumer Advocate expects all electric utilities going forward to use available cost benchmarks to compare against project component cost estimates provided in project pro formas, and to challenge developers on individual project component cost estimates during pricing negotiations when any one appears unreasonable high[;]" and
>
> 2. "[T]he Consumer Advocate also urges the Commission to insure that, as part of its review of any PPA or renewable resource applications, the review and approval of such applications provide clear and transparent language that sends a message to the utility companies and the developers that, while Hawaii is aggressively seeking to migrate towards its 100% RPS goals, it is not at any cost and that utility companies and developers should seek to bring reasonably priced projects before the Commission."[144]

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[143]Consumer Advocate's SOP at 17.

[144]Consumer Advocate's SOP at 19.

2.

Whether MECO's Purchased Power Arrangements Under the PPA are Prudent and in the Public Interest

The Consumer Advocate reviewed a number of PPA terms and provisions, including performance requirements and liquidated damages, particularly related to the BESS; Article 12.10, requiring MECO and MNEP to consider in good faith a proposal from a not-for-profit community organization to purchase the Facility; and the "evergreen" clause, which provides that the PPA and the pricing in place at the end of the 22 year term will continue until terminated by either Party.

With regards to the pricing structure and liquidated damages, the Consumer Advocate raises concerns that "a significant portion of the revenues paid are fixed" monthly payments for the BESS and that the PPA terms may not adequately protect consumers if the Project does not perform as expected or "properly balance the value and cost of" the capacity associated with the BESS.[145] The Consumer Advocate essentially asserts that PPAs should provide for adequate incentives for the utility or developer to ensure that the resources paid for by customers are actually available. In this case, as discussed below, the Consumer Advocate recommends

[145]Consumer Advocate's SOP at 22.

that liquidated damages for the BESS be revised to fully offset BESS Services Fixed Payments if the BESS is unavailable.[146]

The Consumer Advocate acknowledges the efforts of MECO, MNEP, and MNEP's predecessors, "to structure a proposal that both incorporates community feedback and is projected to result in bill savings[,]"[147] specifically citing a number of specific outreach efforts, discussions, and meetings conducted between 2014 and 2018. Turning to Article 12.10 specifically, the Consumer Advocate does not object to the provision, and "recognizes MNEP's efforts to include language in the proposed PPA to address a concern raised by a number of Molokai residents and [SM.]"[148] Still, the Consumer Advocate is in agreement with SM that "it is unclear what the community should take away from a commitment to 'consider' such a proposal 'in good faith.'"[149] While the Consumer Advocate indicates its dissatisfaction, stating that "the language . . . would ideally reflect broad community input as well as master plan findings," the Consumer Advocate acknowledges that "such efforts would likely" delay approval of the Project,

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[146]Consumer Advocate's SOP at 24.

[147]Consumer Advocate's SOP at 28.

[148]Consumer Advocate's SOP at 27.

[149]Consumer Advocate's SOP at 27.

which would then affect the availability of tax credits.[150] On the topic of community views of the project, the Consumer Advocate acknowledges that (1) a number of public comments were submitted "voicing support for the project and for [] Molokai's transition away from the use of fossil fuel[;]"[151] and (2) that the manager of Punawai 'O Pu'uhonua states that he would not have "consider[ed] funding the Project if it didn't have the community's support."[152]

With regards to the "evergreen provision," the Consumer Advocate is concerned that by permitting the PPA to automatically continue at the end of its term, under the pricing in place at that time, that customers are committed to "paying a higher than necessary cost for the delivery of energy and capacity."[153] The Consumer Advocate essentially argues that the pricing terms, which include the fixed monthly BESS payments, are likely to permit MNEP to recover 100% of its costs within the 22 year project term. As such, "allowing an evergreen clause that has pricing terms that continue the Initial Terms pricing should not be allowed" as prices that "contain capital costs [ ] after

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[150]Consumer Advocate's SOP at 2.

[151]Consumer Advocate's SOP at 29.

[152]Consumer Advocate's SOP at 28 (citing https://themolokaidispatch.com/large-scale-solar-moves-forward/).

[153]Consumer Advocate's SOP at 29.

the Initial Term burdens the customers with overcompensating the developers of such projects."[154] To address this concern, the Consumer Advocate recommends that the PPA be amended "to allow the utility, if the purchase option is not pursued by a non-profit organization, to purchase the facility at remaining net book value from MNEP, with the possible addition of some additional reasonable value, if necessary."[155]

3.

Additional Considerations

The Consumer Advocate also acknowledges the following benefits and considerations:

1. The Project is projected to reduce MECO's fuel consumption, thereby reducing ratepayers' exposure to fuel price volatility; [156]

2. The BESS will provide time-shifted energy as well as other beneficial ancillary services; [157]

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[154]Consumer Advocate's SOP at 30.

[155]Consumer Advocate's SOP at 30.

[156]Consumer Advocate's SOP at 31.

[157]Consumer Advocate's SOP at 31.

3. The Project will provide 46.4% of Molokai's RPS, thereby bringing Molokai closer to utilizing 100% renewable energy;[158]

4. According to MNEP's representations, the Project will provide local jobs, job training, and educational opportunities to the Molokai community; and MNEP will participate in environmental and sustainability initiatives in the community.[159]

4.

Conditions of Approval

The Consumer Advocate's proposed conditions of approval, along with the reasons for each condition, are discussed below:

1. "[O]nce the facility is operational, MNEP should provide copies of its calculation of the final costs and final expected return along with the documentation to support those calculations."[160]

Related to its concerns about pricing and the lack of competitive bidding, the Consumer Advocate states that this

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[158]Consumer Advocate's SOP at 32.

[159]Consumer Advocate's SOP at 32.

[160]Consumer Advocate's SOP at 11-12.

condition is intended "to provide further transparency regarding the Project's actual costs and performance."[161]

2. The PPA should be amended to include a provision "requiring that copies of all invoices be provided to the Commission and Consumer Advocate from MNEP related to the engineering, procurement, construction, and maintenance associated with the MNEP Facility no later than sixty (60) days after commercial operation date, including a copy of the fully executed Lease."[162]

This condition is related to concerns "regarding the Project's relatively high costs" compared with other solar plus storage projects,[163] and MECO's failure to independently assess costs in the pro forma.[164]

3. "MNEP should be required to provide copies of income statements or results of operations related to the Facility that will allow the Commission and Consumer Advocate to evaluate

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[161]Consumer Advocate's SOP at 11. In addition, the Consumer Advocate states that the documentation required by this condition "would also help inform and enforce MNEP's statement that if it is successful in reducing project costs, it will be able to provide additional community benefits." Consumer Advocate's SOP at 12.

[162]Consumer Advocate's SOP at 18.

[163]Consumer Advocate's SOP at 18.

[164]Consumer Advocate's SOP at 17-18.

the comparability of the project's actual results to [MECO's] analysis."[165]

Similar to conditions 1 and 2, above, this condition relates to the PPA pricing, and to MECO's determination that MNEP's internal rate of return and energy price were acceptable.[166]

4. MECO "should provide regular reports that support the finding that Maui Electric is seeking to take advantage of the Post Initial Energy Rate."[167]

This condition relates to the pricing terms of the PPA and how MECO will dispatch power on Molokai, and is intended to "facilitate regulators' review of whether [MECO] is aggressively seeking to lower customers' electricity bills, while still providing reliable, safe, and quality electricity services to Molokai residents and businesses."[168] The Consumer Advocate

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[165]Consumer Advocate's SOP at 18-19.

[166]See Consumer Advocate's SOP at 17-18.

[167]Consumer Advocate's SOP at 19-20.

[168]Consumer Advocate's SOP at 19; see also id. at 21 (stating, "the Consumer Advocate has recommended the reporting requirement regarding system dispatch review so that the Commission and Consumer Advocate will have evidence relating to the availability of resources as well as whether [MECO] is cost-effectively dispatching resources, such as the Project."). The commission notes that it appears that this type of report is part of a larger effort by the Consumer Advocate to seek assurances with regards to how the Hawaiian Electric Companies are dispatching resources. The Consumer Advocate states, it "has already inquired and discussed whether the Hawaiian Electric Companies are open to conducting reviews of how operators dispatched system resources to

contends that this condition, and similar types of reports related to how operators dispatch system resources will "be integral in determining whether Maui Electric made reasonable efforts to take advantage of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers."[169] The Consumer Advocate references quarterly reports, but states it "is open to discussions . . . on other reporting frequency requirements."[170]

5. "[A]t a minimum, [ ] the liquidated damages associated with the BESS [should] be revised to fully offset any BESS Services Fixed Payment in situations where the BESS is unavailable so that customers are not being asked to pay for functionality that is not being provided and that there is an incentive to make the resource available again as soon as possible."[171]

Utilizing the BESS Services Fixed Payment and Liquidated Damages for Year 1 as an example, the Consumer Advocate demonstrates that, under the current PPA terms, there is a

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see if there were opportunities to dispatch the system more cost-effectively and/or to determine whether additional renewable resources could have been cost-effectively dispatched without affecting system reliability." Id. The Consumer Advocate additionally states that "the Hawaiian Electric Companies have indicated that they have already engaged in such reviews." Id.

[169]Consumer Advocate's SOP at 20.

[170]Consumer Advocate's SOP at 20.

[171]Consumer Advocate's SOP at 24.

possibility that MECO ratepayers may be required to pay for BESS services that are unavailable, "as the payments for the liquidated damages does not fully offset the BESS Services Fixed Payment[.]"[172] The Consumer Advocate recommends this condition to ensure that customers are not paying for resources that are unavailable, and that "there is an incentive to make the resource available again as soon as possible."[173]

6. The PPA should be modified "to allow the utility, if the purchase option is not pursued by a non-profit organization, to purchase the facility at remaining net book value from MNEP, with the possible addition of some additional reasonable value, if necessary."[174]

This condition relates to the "evergreen provision." The Consumer Advocate is concerned that customers are committed "to paying a higher than necessary cost for the delivery of energy and capacity[,]" and that it is likely that the pricing terms will permit MNEP to recover its costs during the Initial Term of the Project.[175] The true value of the project, the Consumer Advocate contends, is provided when the initial capital costs have been

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[172]Consumer Advocate's SOP at 23.

[173]Consumer Advocate's SOP at 24.

[174]Consumer Advocate's SOP at 30.

[175]Consumer Advocate's SOP at 29.

paid off. Thus, the Consumer Advocate's position is that allowing an evergreen clause with pricing terms that extend the Initial Term should not be allowed, and therefore the PPA should be modified as discussed above.[176]

D.

MECO's Reply Statement of Position

1.

MECO's Position on the Consumer Advocate's Recommended Conditions of Approval

MECO provides its response to the Consumer Advocate's six conditions of approval, and MNEP's response, as applicable.

Conditions 1-3 (MNEP's Position). MNEP does not object to Conditions 1-3, but "requests that the Commission provide confirmation in its order that the PPA terms and pricing will not change as a result of providing these documents[,]" to provide needed "certainty with respect to the price and risk profile of the PPA" to its lenders.[177] As to Condition 3, "MNEP states that it does not object [] but recommends that such filings be made annually and limited to the first three years of commercial operation."[178]

[176]See Consumer Advocate's SOP at 30.

[177]MECO's Reply at 6.

[178]MECO's Reply at 6.

Conditions 1-4 (MECO's Position). MECO does not object to these reporting requirements and states that the filing shall be provided under seal and provided to the Consumer Advocate and the commission.[179] For Condition 4, MECO states that it "is amenable to working with the Consumer Advocate to establish an appropriate format and frequency of filing for such reports with consideration as to the availability of appropriate data."[180]

Condition 5. MECO states that both MECO and MNEP understand the Consumer Advocate's concerns that customers may pay for BESS Services that would be unavailable based on the Liquidated Damages provision.[181] MECO represents that "MNEP is amenable to amending the PPA so that the relevant liquidated damages associated with the BESS be revised such that if the BESS is unavailable for a full calendar year, and such failure is not due to a force majeure event, then at the end of such year, MNEP shall pay as additional liquidated damages the difference between any BESS Services Fixed Payment made in such year and any applicable liquidated damages relating to the BESS services."[182]

[179]MECO's Reply at 5-7.

[180]MECO's Reply at 7.

[181]MECO's Reply at 7.

[182]MECO's Reply at 7-8.

Condition 6. MECO states that MNEP "is not amenable" to this condition.[183] MECO contends that this condition calls in to question MNEP's ability to finance the project: "Since it can be argued that the Project should be fully depreciated over 22 years and therefore having remaining net book value of zero, the addition of this amendment would remove the potential residual value of the Project, on which the equity holder is relying."[184]

2.

MECO's Response to SM's SOP

MECO states its appreciation of SM's "contributions and insight to this docket" but highlights a number of points on which it disagrees with SM,[185] essentially asserting that, in MECO's view, there was sufficient community engagement, and the PPA provides an actual opportunity for community ownership.[186]

Responding to SM's position that there was "insufficient community engagement," MECO cites community outreach efforts of both MECO and MNEP, including community meetings and small group discussions that took place over several years, as well as efforts

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[183]MECO's Reply at 8.

[184]MECO's Reply at 8.

[185]MECO's Reply at 9.

[186]See MECO's Reply at 10-12.

to obtain and incorporate community feedback on the PPA and energy plans more generally.[187] MECO additionally affirms its commitment, and that of MNEP, to ongoing community engagement as a key element of the success of the Project.[188]

MECO disagrees with SM's position that the PPA "'does not appear to create any real rights or opportunities' for community ownership of the Project."[189] MECO characterizes Article 12.10 as "creat[ing] an affirmative contractual obligation as between [MECO] and [MNEP] that requires that such Parties consider, in good faith, any proposal to acquire the Facility submitted by a community-controlled not-for-profit or similar entity."[190] MECO additionally clarifies that a proposal from a community-controlled not-for-profit or similar entity would not be superseded by MECO's right to first negotiation.[191]

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[187]MECO's Reply at 10.

[188]MECO's Reply at 10.

[189]MECO's Reply at 11.

[190]MECO's Reply at 11-12.

[191]MECO's Reply at 11.

E.

Public Comments

As noted by the Consumer Advocate, a number of Molokai ratepayers filed comments in the docket in support of the project.[192] Common discussion points include support for: reducing the use of fossil fuels; transitioning Molokai to a clean energy future; and pursuing a solar energy and/or storage project on Molokai. While some residents voiced concerns relating to the lack of competitive bidding, others referenced the possibility that competitive bidding would not result in lower costs, and highlighted the availability of tax credits for the Project.

Apart from the comments filed by Fred Redell, discussed below, two comments in opposition to the project were filed in the docket.[193] Commenters voiced concerns about the PPA term,[194] lack of competitive bidding, and energy rates.[195] One commenter expressed concerns that the community purchase provision lacked details and requires further detail and explanation.[196]

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[192]Consumer Advocate's SOP at 29.

[193]See Public Comments, filed on May 7, 2018, and May 14, 2018.

[194]See Public Comment, filed on May 7, 2018 (recommending a two to five year maximum contract term).

[195]See Public Comments, filed on May 7, 2018, and May 14, 2018.

[196]See Public Comment filed on May 14, 2018.

Fred Redell filed two public comments in the docket, initially in opposition, and later taking no position.[197] Prior to the discovery period in this proceeding, Mr. Redell stated his opposition to the Project, citing concerns related to the lack of competitive bidding; cost of the Project and the PPA pricing structure; the Project size, in relation to Molokai's total energy needs; and transitioning away from fossil fuels too quickly, to the disadvantage of Molokai ratepayers.[198] On June 22, 2018, Mr. Redell filed additional public comments in the docket, taking "no position," and stating that if the Consumer Advocate found "the price of the project reasonable and comparable to the market allowing for considerations for the uniqueness of the project, the [County of Maui] would support this project[,]" provided certain ratepayer protections were in place.[199] The recommended protections generally focus on the efficient dispatch and delivery of energy; and risk and cost allocation between MNEP, MECO, and

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[197]Public Comments, filed April 6, 2018, and June 22, 2018. Mr. Redell alleges that the public comments are filed on behalf of the County of Maui. However, the commission notes that Mr. Redell does not identify his job title and the comments were not filed on County of Maui Letterhead. The commission also notes that Mr. Redell was named as the County of Maui's Energy Commissioner in April 2016.

[198]Public Comments of Fred Redell, filed on April 6, 2018.

[199]Public Comments of Fred Redell, filed on June 22, 2018.

ratepayers.[200] Specifically, Mr. Redell recommends: obtaining an independent audit or hiring an Independent Observer to determine the unconstrained energy potential of the Project; monthly capacity tests for the BESS; retention of an expert in reliability and interconnection; and potential limits to recovery of costs through the ECAC, if certain costs are not appropriate.

V.

REGULATORY FRAMEWORK

A.

HRS § 269-27.2(c) and HAR § 6-74-22(a)

MECO seeks the commission's approval of the PPA pursuant to HRS § 269-27.2(c) and HAR § 6-74-22(a).[201] These respective provisions provide:

> **§ 269-27.2 Utilization of electricity generated from nonfossil fuels.**
>
> . . . .
>
> (c) The rate payable by the public utility to the producer for the nonfossil fuel generated electricity supplied to the public utility shall be as agreed between the public utility and the supplier and as approved by the public utilities commission; provided that in the event the public utility and the supplier fail to reach an agreement for a rate, the rate shall be as prescribed by the public utilities commission according to

[200]Public Comments of Fred Redell, filed on June 22, 2018.

[201]Application at 4-5.

> the powers and procedures provided in this chapter [269].
>
> The commission's determination of the just and reasonable rate shall be accomplished by establishing a methodology that removes or significantly reduces any linkage between the price of fossil fuels and the rate for the nonfossil fuel generated electricity to potentially enable utility customers to share in the benefits of fuel cost savings resulting from the use of nonfossil fuel generated electricity. As the commission deems appropriate, the just and reasonable rate for nonfossil fuel generated electricity supplied to the public utility by the producer may include mechanisms for reasonable and appropriate incremental adjustments, such as adjustments linked to consumer price indices for inflation or other acceptable adjustment mechanisms.

HRS § 269-27.2(c).

> **§ 6-74-22 Rates for purchases.**
>
> (a) Rates for purchases shall:
>
> (1) Be just and reasonable to the electric consumer of the electric utility and in the public interest;
>
> (2) Not discriminate against qualifying cogeneration and small power production facilities; and
>
> (3) Be not less than one hundred per cent of avoided cost for energy and capacity purchases to be determined as provided in [HAR] § 6-74-23 from qualifying facilities and not less than the minimum purchase rate.

HAR § 6-74-22(a).

Concomitantly, HAR § 6-74-15(b)(1) provides that HAR § 6-74-22 does not prohibit an electric utility or any qualifying facility from agreeing to a rate for any purchase, or terms or conditions relating to any purchase, which differ from the rate or terms or conditions which would otherwise be required by HAR § 6-74-22.

B.

HAR § 6-60-6(2)

HAR § 6-60-6(2) states:

> No changes in fuel and purchased energy costs may be included in the fuel adjustment clause unless the contracts or prices for the purchase of such fuel or energy have been previously approved or filed with the commission.

C.

HRS § 269-6(b)

HRS § 269-6(b) states, in relevant part:

> The public utilities commission shall consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its authority and duties under this chapter. In making determinations of the reasonableness of the costs of utility system capital improvements and operations, the commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions.

VI.

DISCUSSION

A.

Findings and Conclusions

1.

Issue 1

Whether MECO Has Met Its Burden of Proof in Support of Its Request for Approval of the PPA

Upon review of the record, the commission finds and concludes that MECO has met its burden of proof in support of its request for approval of the PPA, including that the purchased energy charges and BESS fixed payments to be paid by MECO pursuant to the PPA are just and reasonable; and that the purchased power arrangements under the PPA are prudent and in the public interest. In support thereto, the commission specifically finds and concludes:

1. The State's RPS law, applicable to electric utilities, is codified in Part V of HRS chapter 269.[202]

2. Pursuant to HRS § 269-91, "renewable energy" includes energy generated or produced from the sun.[203] "Cost-effective," in turn:

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[202]See HRS §§ 269-91 to 269-96.

[203]HRS § 269-91.

> [M]eans the ability to produce or purchase electric energy or firm capacity, or both, from renewable energy resources at or below avoided costs or as the commission otherwise determines to be just and reasonable consistent with the methodology set by the public utilities commission in accordance with [HRS] 269-27.2.[204]

3. Act 97, 2015 Session Laws of Hawaii, which took effect on July 1, 2015, amended HRS § 269-92(a) by: (A) increasing the existing RPS for 2020 from twenty-five percent (25%) to thirty percent (30%); (B) retaining without change the existing forty percent (40%) RPS for 2030; and (C) adopting renewable portfolio standards of seventy percent (70%) by 2040 and one-hundred percent (100%) by 2045.[205]

4. For the year ending December 31, 2017, the Hawaiian Electric Companies attained a consolidated RPS of 26.8%, with MECO attaining an RPS of 34.2% on a stand-alone basis.[206]

5. HRS § 269-6, governing the commission's general powers and duties, provides in part:

> **§269-6 General powers and duties. . . .**
>
> (b) The public utilities commission shall consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its authority and duties under [] chapter [269].

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[204]HRS § 269-91.

[205]Act 97 (2015), § 2; see HRS § 269-92(a).

[206]In re Public Util. Comm'n, Docket No. 2007-0008, 2017 Renewable Portfolio Standard Status Report, dated February 8, 2018, at 1, 3.

> In making determinations of the reasonableness of the costs of utility system capital improvements and operations, the commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions. The commission may determine that short-term costs or direct costs that are higher than alternatives relying more heavily on fossil fuels are reasonable, considering the impacts resulting from the use of fossil fuels.
>
> (c) In exercising its authority and duties under [] chapter [269], the public utilities commission shall consider the costs and benefits of a diverse fossil fuel portfolio and of maximizing the efficiency of all electric utility assets to lower and stabilize the cost of electricity. Nothing in [] section [269-6] shall subvert the obligation of electric utilities to meet the renewable portfolio standards set forth in section 269-92.

6. On April 28, 2014, the commission issued the "Commission's Inclinations on the Future of Hawaii's Electric Utilities" ("Inclinations") as an attachment to Decision & Order No. 32052 in Docket No. 2012-0036.[207]

7. The commission, in its Inclinations, emphasized the need for the electric utilities to stabilize customer bills and lower energy rates/costs through actions that include the

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[207]The opening order in Docket No. 2012-0036 initiated the HECO Companies' Integrated Resource Planning Process. See Order No. 30233, filed on March 1, 2012.

aggressive pursuit of new clean energy sources and expanding choices for customers to manage their energy use.[208]

8. The commission, as part of its Inclinations, also focused on: (A) the need for new renewable energy projects to lower system costs and maximize the use of cost-effective renewable resources;[209] and (B) the Hawaiian Electric Companies' mandate to "continue to pursue alternative procurement strategies to ensure that the lowest cost utility-scale energy projects are acquired."[210]

9. Act 32, 2017 Session Laws of Hawaii, which took effect on July 1, 2017, requires the State to expand strategies and mechanisms to reduce greenhouse gas emissions statewide through the reduction of energy use, adoption of renewable energy, and control of air pollution amongst all agencies, departments, industries, and sectors, in alignment with the principles and goals adopted in the Paris Agreement (also known as the Paris climate agreement or the Paris climate accord).[211]

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[208]See, e.g., Commission's Inclinations at 2-3.

[209]Commission's Inclinations at 4-5.

[210]Commission's Inclinations at 5 (footnote omitted).

[211]Act 32 (2017), § 2.

10. On July 14, 2017, the commission issued Decision and Order No. 34696 in Docket No. 2014-0183[212] accepting the Power Supply Improvement Plans Update Report ("PSIPs") for the respective HECO Companies, and providing guidance for implementing the near-term actions identified.[213] In accepting the PSIPs, the commission indicated its support for: the HECO Companies' intentions to make grid reliability improvements;[214] and "MECO's efforts to achieve 100% renewable energy for the island of Molokai and Lanai ahead of the timeline established in the RPS."[215] In addition, the Commission expressed concern related to MECO's stated plans to utilize biofuels to achieve 100% renewable energy, stating that the upcoming RFP process for new grid scale resources "should include an opportunity for competitive bidding for

[212]Docket No. 2014-0183, Decision and Order No. 34696, filed on July 14, 2017 ("Decision and Order No. 34696").

[213]Decision and Order No. 34696 at 2.

[214]See Decision and Order No. 34696 at 31, 38.

[215]Decision & Order No. 34696 at 42. The PSIPs include plans to achieve 100% RPS by 2020 on the islands of Molokai and Lanai. In Decision & Order No. 34696, the commission also stated: "The Companies should also pursue transparent, competitive and community-engaged efforts for the Islands of Molokai and Lanai, for procuring resources and further considering the costs and benefits of early attainment of 100% renewable generation, consistent with the needs and goals of these communities." Id. at 43.

resources that can provide comparable services as biofuel powered, utility-owned generation."[216]

11. Based on the representations of MECO and MNEP, the Project will produce electric energy or firm capacity from a renewable energy resource.[217]

12. The Project has a maximum allowed export of 2.64 MW.[218] As such, the Framework for Competitive Bidding does not apply to the Project, as the Project has a net output available to the utility of 1% or less than MECO's total firm capacity.[219]

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[216]Decision and Order No. 34696 at 43. The "upcoming RFP" is now the subject of Docket No. 2017-0352.

[217]See HRS § 269-91; Application at 2 ("[t]he Project is an as-available solar PV facility"), 9 (stating, (1) "MNEP represents and warrants that, as of the Commercial Operations Date, the Facility will be a qualified renewable resource under the [RPS] law[;]" and (2) "any and all energy produced, stored and delivered by MNEP to [MECO] from or through the Facility throughout the term of the PPA will meet the definition of 'renewable electrical energy' or 'renewable energy' as defined under HRS § 269-91."); see generally, PPA.

[218]Application at 1, 8.

[219]See Application at 6; PPA, Exhibit B-2 at B-2-3. MECO's Adequacy of Supply Report, filed January 30, 2018, indicated a total firm capacity for MECO of 277.7 MW (Maui, 246.3; Lanai, 9.4; Molokai, 12.0 MW).

Section II.A.3.f of the Framework for Competitive Bidding states:

> This Framework also does not apply to: (i) units with a net output available to the utility of 1% or less of a utility's total firm capacity, including that of independent power producers, or with a net output of 5 MW or less, whichever is lower {for systems that cover more than one island (i.e., Maui Electric Company,

13. MECO represents that the energy pricing for the Project was "determined through a series of proposals and arms-length negotiations between the Parties[,]" and that MECO's "key considerations" included: (A) "Maui Electric - Moloka'i's desire for additional renewable energy resources to reach its 100% renewable energy goal;" (B) "delinking the pricing of the IPP energy from fossil fuel prices to comply with HRS § 269-27.2(c);" (C) "pricing of energy from other as-available renewable energy projects;" (D) "pricing of the proposal compared to Maui Electric's long-run avoided energy costs;" and (E) "cost savings to the customer."[220]

14. MNEP represents that it determined the "minimal contracted revenue [for the Project] to ensure financeability . . . and based [its] minimal contracted revenue on the revenue and risk profile that was required of lenders and tax equity in similar past projects."[221]

15. Pursuant to the PPA, the estimated levelized energy price of $0.18/kWh is comprised of three energy rates and a fixed

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> Ltd.'s system, which has generation on Maui, Molokai and Lanai), the system firm capacity will be determined on a consolidated basis) . . . .

Docket No. 03-0372, Decision and Order No. 23121, filed on December 11, 2006, Exhibit A at 5.

[220]Application at 9; see also id. at 14.

[221]MNEP's Response to CA/MNEP-SIR-5.a.1.

monthly BESS payment.[222] The three energy rates are subject to an annual 1.2% escalation factor;[223] while the fixed monthly BESS payment is subject to an escalation factor of approximately 1.2% per year, except for contract years 8 and 18, in which the annual payments increase by over $200,000.[224] The energy rates and fixed monthly BESS payment are as follows:[225]

Contract Year	Initial Energy Rate ($/kWh)	Post Initial Energy Rate ($/kWh)[226]	Energy Rate for Time-Shifted PV Energy ($/kWh)	BESS Services payment (Fixed $/month)[227]
1	$0.05211	$0.02246	$0.05211	$101,083.50

[222]See, e.g., Application at 10; PPA at Table J-1.

[223]PPA at Table J-2.

[224]PPA at Table J-3; Application at Exhibit 2 at 4. MNEP explains that it "relied on an escalation to cover [ ] replacement needs for battery module replacement." MNEP's Response to CA/MNEP-IR-7.a.

[225]PPA at Table J-1, J-2, J-3.

[226]With regards to the Post-Initial Energy Rate, MNEP represents that it set a very low bargain price for the post-initial energy rate to incentivize MECO to manage demand so as to take as much daytime power as possible." MNEP's Response to CA/MNEP-SIR-5.a.1; see also MNEP's Response to CA/MNEP-IR-7.b.

[227]With regards to the fixed monthly BESS payment, MNEP states, "[i]n order to be able to finance this project, some minimal contracted revenue was necessary to be able to support bank and tax equity underwriting and financing." MNEP's Response to CA/MNEP-IR-7.b.; see also MNEP's Response to CA/MNEP-SIR-5.a.1. (citing curtailment risk and "the significant uncertainty as to Molokai's future energy needs[.]").

2-22	1.2% annual escalation	Escalation pursuant to Table J-3

16. In its pro forma cash flow analyses (i.e., MECO's Confidential Exhibit 3), MNEP calculated: (A) its annual internal rate of return;[228] and (B) a net present value for the proposed Project.[229]

17. MNEP's pro forma cash flow analyses are based on the actual or estimated capital costs for the proposed Project (including engineering, procurement, and construction costs),[230]

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[228]MNEP also represents that its most recent expected internal rate of return is lower than the target return because the PPA "pricing was agreed prior to (a) increases in prices of cobalt, and therefore batteries (b) new solar panel import duties (c) tariffs increasing the cost of steel and aluminum (d) a lower tax rate that decreases the value of both the depreciation and new markets tax credit[.]" MNEP's Response to CA/MNEP-SIR-7.b.2; see also MECO's Response to CA-IR-6.

[229]See Application at Exhibit 3; see also MNEP's Response to CA/MNEP-IR-1.

[230]See MECO's Response to CA-IR-6.a.1., -7 (MECO represents that MNEP states that its "estimated total capital costs of the project was provided . . . in the PPA application . . . and was [its] best estimate of the total capital costs at such time."); MNEP explains that it selected S&C Electric Company ("S&C") as the EPC contractor for the Project due to S&C's experience and expertise with micro-grids; and that S&C's price was similar to prices for similar MNEP projects on the mainland. MECO's Response to CA-IR-6; see MNEP's Response to CA/MNEP-IR-8.b. With regards to the total project cost, MNEP represents that "[t]he total project cost is based on the total of all of the lowest cost technically compliant bids received[,]" and explains that (1) "[HMV] retained a construction manager within S&C to prepare the initial design and seek multiple competitive bids for equipment and construction labor for all trade sectors of the plant work[;]"

the estimated annual costs to operate and maintain the proposed Project;[231] and the actual land lease costs.[232]

18. MECO reviewed MNEP's pro forma cash flow analyses "to ensure that the Project would provide a cost savings to its customers."[233] MECO compared certain elements in MNEP's pro forma to other pro formas submitted to the Hawaiian Electric Companies. With regards to: (A) the internal rate of return, MECO "determined that MNEP's proposed internal rate of return was one of the lowest internal rates of return for a Project in recent years[;]"[234] and

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(2) "HMV's construction manager prepared and obtained multiple bid packages for the following: civil site work, electrical work, PV installation, concrete work, building construction, PV panels, PV inverters, PV racking, energy storage batteries, medium voltage switchgear and cables[;]" and (3) that MNEP made its own forecast for batteries and solar panels "based on current market prices and assumed a price reduction" compared with the results of the competitive bidding process." MECO's Response to CA-IR-6.a.1. MNEP additionally represents that it "underestimated the cost of [PV] panels" "due to the new 30% solar panel import duty" and "increases in Lithium and Cobalt," making batteries more expensive. MECO's Response to CA-IR-6.a.1; see also MNEP's Response to CA/MNEP-SIR-2.d.2.

[231]See MNEP's Responses to CA/MNEP-SIR—2.a., -2.d.1 & 2, -4.

[232]See MNEP's Response to CA/MNEP-SIR-4.a; see also MECO's Responses to SM/MECO-IR-1.e. (MNEP states, "[t]he MNEP project land costs are lower than offers received from other land owners on other islands. . . . The land price for this project is well within [the range for suitable land in Hawaii] and is very comparable to other sites we have considered in Hawaii.").

[233]MECO's Response to CA-IR-5.b.

[234]MECO's Response to CA/MECO-SIR-5.a.1; see also MECO's Response to CA-IR-10.b. (stating that MECO "compared MNEP's internal rate of return against other projects, and as MNEP's

(B) the energy price, MECO determined that, based on its "pricing analysis[,] the pricing structure for the Project provided an immediate cost savings to customers[.]"[235]

19. In its pricing analyses, MECO utilized a production simulation model to evaluate the following: fuel consumption and avoided fuel costs; the total long-run avoided costs; the customer bill impact; and the benefit to cost ratio for the Project. MECO's analyses set as a baseline the Molokai 100% Renewables Plan included in the PSIP.[236] The scenarios differed as to the timing and quantity of integrating other resources into Molokai's electric system (namely, utility-scale wind and biofuels) and when Molokai was projected to achieve 100% renewable energy.[237] Based on its analyses:

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proposed rate of return is one of the lowest rate of returns for a PPA that Maui Electric has executed, Maui Electric determined that MNEP's rate of return was reasonable.").

[235]MECO's Response to CA/MECO-SIR-5.a.1.

[236]Application, Exhibit 2 at 1.

[237]See Application, Exhibit 2 at 2; MECO's Response to CA/MECO-SIR-10 (confidential excel files); see also Consumer Advocate's SOP at 12-13 (summarizing the three scenarios utilized).

MECO presents three scenarios to evaluate the Project and estimate fuel consumption and avoided fuel costs; the total long-run avoided costs; the customer bill impact; and the benefit to cost ratio for the Project. These scenarios are variations on the action plans in MECO's PSIP, which prioritizes accelerated achievement of 100% renewable energy compared to the 100% RPS requirement for 2045. The commission accepted MECO's PSIP, subject

A. MECO determined that the Project results in reduced fuel consumption[238] and avoided fuel costs[239] for each of the three scenarios. Under Scenario 2, for example, which assumes that Molokai reaches 100% renewable energy by 2030, MECO "estimate[s] that the Project would displace approximately 42% of diesel and 51% of biodiesel that [MECO] would have purchased[,]" which "is equal to a total net present value avoided fuel cost of approximately $34.5 million"[240] and results in reduced fuel

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to certain conditions, by Decision and Order No. 34696, filed July 14, 2017, in Docket No. 2014-0183.

Scenario 1 assumes Molokai achieves 100% renewable energy in 2020 by switching to biofuels and integrating 5 MW of utility scale wind. For this scenario, the MNEP project displaces 2 MW of utility scale wind and biofuels beginning in 2020.

Scenario 2 assumes Molokai achieves 100% renewable energy in 2030 by adding 5 MW of utility-scale wind in 2020 and switching to biofuel in 2030. For this scenario, the MNEP project displaces 2 MW of utility-scale wind as in Scenario 1, and reduces the biofuels needed beginning in 2030.

Scenario 3 assumes Molokai achieves 100% renewable energy in 2030 by adding 5 MW of utility-scale wind and switching to biofuel, both in 2030. This scenario is similar to Scenario 2, in that the MNEP project displaces 2 MW of utility-scale wind and reduces the biofuels needed beginning in 2030, except that the utility-scale wind is not assumed to come online until 2030.

[238]See MECO's Reply at 9; Application at 15, Exhibit 2 at 4 (referencing scenarios 1 and 2, as scenario 3 was included in the record in response to CA/MECO-IR-10).

[239]See Application, Exhibit 2 at 5; CA/MECO-SIR-10, Attachment 3.

[240]Application at 15 (emphasis added); see id. at Exhibit 2 at 2, 4, 5.

consumption, in gallons, as follows: (1) Diesel: 142,063; (2) Biodiesel: 159,085.[241] MECO represents that energy from "the Project will significantly reduce fuel consumption in Maui Electric's own generating units."[242]

B. MECO determined that its bill impact analysis for a typical residential customer using 400 kWh/month shows that the energy prices for the PPA are projected to lower customer bills over the short-term and long-term of the 22 year Initial Term of the PPA under all three scenarios.[243] For example, under Scenario 2,[244] the estimated reduction for a typical monthly residential bill was ($4.63) in 2019; and ($35.92) in 2024.[245]

C. MECO determined that, in its benefit to cost ratio analysis comparing the estimated costs to MECO under the PPA with MECO's total long run avoided costs,[246] the benefits of the project

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[241]Application, Exhibit 2 at 4.

[242]Application at 15, Exhibit 2 at 4.

[243]See Application, Exhibit 2 at 7, Attachment 20, 21; CA/MECO-SIR-10 Attachment 3; see also Consumer Advocate's SOP at 12-14.

[244]The commission notes that it is unclear why similar data for Scenario 3 was filed under seal.

[245]Application, Exhibit 2, Attachment 20; see also id. Attachment 21.

[246]See Application, Exhibit 2 at 2, 3, 5; CA/MECO-SIR-10 Attachment 3; see also Consumer Advocate's SOP at 12-14. MECO explains that its "total long-run avoided costs are the sum of the avoided fuel costs, O&M expense, and IPP costs" and "are based on

exceed the costs; more specifically, the benefit to cost ratios for the scenarios were between 2.6 and 2.2.[247] MECO points out that its benefit to cost analysis does not account for other non-cost considerations such as "the need to comply with statutory requirement (e.g., RPS) and other non-price considerations (e.g., energy security, emissions)."[248]

E. Overall, MECO represents that "the Project pricing analysis determined that the Project would provide a cost savings to [MECO's] customers[;]"[249] and that MECO "determined that the level and structure of the proposed rates and payments were reasonable since [its] analyses determined that the Project would provide a long term cost savings to the customer based on the price of the Project and how [MECO] anticipated operating the Project."[250]

20. MNEP states that the setting of the energy rates and fixed monthly BESS payments was determined based on MNEP's

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the modeled MNEP PV and BESS Project energy that can be integrated onto the system." Application, Exhibit 2 at 6.

[247]See Application at Exhibit 2 at 7; CA/MECO-SIR-10 Attachment 3; see also MECO's Response to CA/MECO-SIR-5.a.1 (stating that the benefit-to-cost ratio of the proposed Project "compared favorably" to other projects). The commission notes that MECO did not file the benefit to cost ratios for Scenarios 1 and 2 under seal.

[248]Application, Exhibit 2 at 7.

[249]MECO's Response to CA-IR-5.b.

[250]MECO's Response to CA-IR-3.a.

minimal contracted revenue to ensure financeability of the PPA; and was designed "to incentivize MECO to manage demand so as to take as much daytime power as possible."[251]

21. Based on the record, the price in the PPA is delinked from the price of fossil fuels, in compliance with HRS § 269-27.2(c).[252]

22. HRS § 269-6(b) requires the commission to "consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation[.]" As noted above, the PPA will allow MECO to reduce its diesel fuel consumption over the term of the PPA.[253] MECO states that it estimates that the proposed Project would displace approximately 42% of diesel, or 142,063 barrels of diesel fuel that it would have otherwise purchased.[254] The PPA will achieve this reduction by displacing fossil fuel generation with new renewable generation.

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[251]MNEP's Response to CA/MNEP-SIR-5.a.2.

[252]See HRS § 269-27.2(c); and see, e.g., Application at 9 (stating MECO's considerations when negotiating pricing for the proposed Project); MECO's Response to CA-IR-3.a.; MNEP's Response to CA/MNEP-SIR-5.a.2.

[253]Application, Exhibit 2 at 4. In addition to reducing diesel fuel consumption, MECO states it will also be able to reduce biodiesel consumption by 51%, or by 159,063 barrels. Application at 15, Exhibit 2 at 4

[254]Application at 15, Exhibit 2 at 4. In addition to reducing diesel fuel consumption, MECO states it will also be able to reduce biodiesel consumption by 51%, or by 159,063 barrels. Application at 15, Exhibit 2 at 4. Although MECO did find reduced fuel

23. HRS § 269-6(b) also requires the commission to "explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions."[255] Consistent with HRS § 269-6(b), the commission notes that the PPA will:

A. Reduce fossil fuel use, and, thus, the State's reliance and dependence on fossil fuels, which in turn will reduce customer exposure to the volatility of fossil fuel prices (i.e., providing a hedge against oil price volatility) and the risk of potential fossil fuel supply limitations (i.e., providing energy security benefits).[256] Aside from power generated from rooftop solar/distributed generation, the vast majority of Molokai's power is generated from MECO's diesel engine generators.[257]

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consumption and avoided fuel costs under the scenarios, MECO highlights the results of Scenario 2 in the body of its Application.

[255]See HRS § 269-6(b).

[256]See HRS § 269-6(b); and see, e.g., Application, Exhibit 2 at 4-5, Attachment 9-12; CA/MECO-SIR-10 Attachment 3; MECO's Response to PUC-MECO-IR-102 (stating that the "time-shifted energy can [ ] be used to serve customer loads during the evening peak and overnight time periods, which are currently serviced by diesel generation. This essential battery function benefits customers as it allows for lower-cost renewable energy to displace more expensive fossil fuel combustion.").

[257]The commission estimates that Molokai's power comes from diesel generation (approximately 89%) and distributed generation PV (approximately 11%). See, e.g., PSIP in Docket No. 2014-0183,

B. By reducing fossil fuel consumption, the PPA will, in effect, reduce the amount of funds expended on importing fossil fuel.[258] As noted above, MECO represents that all three scenarios considered result in reduced fuel consumption and avoided fuel costs.[259]

C. By reducing fossil fuel consumption, the PPA will provide environmental benefits by reducing the amount of fossil fuel that is utilized to generate energy, thereby reducing the amount of greenhouse gas emissions (i.e., carbon dioxide).[260] MECO represents that all three scenarios result in reduced fuel consumption, resulting in a reduction in greenhouse gases, primarily carbon dioxide, over the 22 year term.[261]

24. Additional benefits of the PPA include:

Appendix K at K-43, filed December 23, 2016; Weekly Queue Report for Docket No. 2014-0192, from July 17, 2018.

[258]See HRS § 269-6(b); and see, e.g., Application, Exhibit 2 at 4-5, Attachment 9-12; CA/MECO-SIR-10 Attachment 3; MECO's Response to PUC-MECO-IR-102.

[259]See, e.g., Application, Exhibit 2, at 4, 6, Attachment 18 and 19; CA/MNEP-SIR-10.

[260]See HRS § 269-6(b); and see, e.g., Application, Exhibit 2 at 4-5, 6, Attachments 9-12, 18, 19; CA/MECO-SIR-10 Attachment 3; MECO's Response to PUC-MECO-IR-102.

[261]See, e.g., Application, Exhibit 2, at 4; CA/MNEP-SIR-10.

A. Diversifying the current supply of Molokai's power, which is primarily comprised of diesel fuel.[262]

B. Contributing towards MECO's (and by extension, the Hawaiian Electric Companies') RPS goals.[263] In this regard, the project will: "contribut[e] approximately 45% to the [RPS] for Moloka'i island" in year 2020;[264] and constitute an average of 46.4% to Molokai's RPS; and an average of 1.1% to MECO's RPS goal, over the 22 year term.[265]

C. A provision requiring MNEP and/or MECO to consider in good faith a proposal to acquire the Facility from a community-controlled not-for-profit corporation or similar entity.[266] Article 12.10 of the PPA represents an affirmative contractual agreement between MECO and MNEP.

25. With respect to the respective positions of the Participants and Parties, and the input received from the public:

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[262]See HRS § 269-6(c); supra, note 253.

[263]See HRS § 269-92.

[264]Application at 2.

[265]See MECO's Response to CA/MECO-SIR-7, Attachment 1 (providing the impact of the proposed Project on the RPS by year from 2019 to 2045, and the average impact, for both Molokai and MECO).

[266]PPA, Article 12.10(B) at 58-59.

A. MNEP states its support for the Project. MECO includes MNEP's responses to the Consumer Advocate's recommended conditions in its Reply.

B. SM states its opposition to the Project. With regards to the Project, SM represents that it met with MNEP representatives, discussed a community engagement plan and benefits package with MNEP and/or MECO, gathered input from the community, and educated the community on community benefits.[267] SM contends that there was insufficient community engagement related to the Project, and that the Project lacks "solid community benefits[.]"[268]

C. The commission notes Consumer Advocate's non-objection to approval of the Project, subject to the conditions recommended in its SOP.

D. The majority of the public comments filed in the docket are in support of the Project and reducing fossil fuel consumption on Molokai. Two members of the public stated their position in opposition to the Project.[269]

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[267]See, e.g., SM's Response to CA/SM-IR-1; SM's Response to CA/SM-IR-6.d.

[268]SM's SOP at 3; see id. at 4, 7-8.

[269]Additionally, and as discussed above, the commission notes that Mr. Redell initially filed comments in opposition; followed by comments stating "no position."

26. With respect to the direct and indirect ratepayer benefits from a technological perspective, the proposed Project will:

A. Provide grid services from the BESS, including inertial fast frequency response; regulating reserve and contingency reserve; power factor correction and voltage support; and black start capability.[270] These grid services are designed to improve reliability for Molokai's "small isolated electrical system[,]"[271] and minimize the need for additional generation to respond to grid events and system disturbances.[272]

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[270] See, e.g., Application at 8; PPA at B-2; MECO's Response to PUC-MECO-IR-102.

[271] MECO's Response to PUC-MECO-IR-102.

[272] See, e.g., MECO's Responses to CA/MECO-SIR-1.b.; MECO's Responses to PUC-MECO-IR-102, -103, -105.

In response to the Consumer Advocate's information request about service quality issues, MECO states that Molokai's "system loads vary[ ] from a peak system load of 5.95 MW at 6:15 p.m. on November 1, 2017 to a minimum system load of 1.55 MW at 1:43pm on March 10, 2018." MECO's Response to CA-IR-20.a. MECO further explains that "[f]requency deviations occur on Moloka'i due to the limited resources on the grid to mitigate the effects of system disturbance events[;]" that such events "can impact the frequency by dragging the frequency down rapidly before a circuit breaker or other protection can isolate the fault[;]" and that "voltage deviations can occur during faults on the system" or "can also be attributed to large water pump motor starts." MECO's Response to CA-IR-20.a. MECO provides "details of all the major outages greater than 600 kW on Moloka'i from January 2015 to March 2018" under seal. See MECO's Response to CA-IR-20.a (listing 31 events).

B. Provide time-shifted PV energy "that would otherwise not be readily acceptable during the peak solar hours[,]" which "can then be used to serve customer loads during the evening peak and overnight time periods, which are currently served by diesel generation."[273]

C. Not impact the growth of distributed energy resources such as rooftop solar.[274]

D. Be located on privately-owned, industrial land adjacent to MECO's Generating Station at Pala'au, which minimizes the distance for interconnection requirements, and reduces risks of disruptions due to external factors.[275]

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[273]MECO's Responses to PUC-MECO-IR-102 (MECO additionally states, "[t]his essential battery function benefits customers as it allows for lower-cost renewable energy to displace more expensive fossil fuel combustion.").

[274]Application at 2 (MECO states, the proposed Project "will not impact the expected growth of distributed energy resources (rooftop solar), since the BESS will be able to time-shift PV energy"); see MECO's Response to CA-IR-17.a (stating, "[t]he Project is not anticipated to impact expected growth of distributed energy resources because the expected attributes of the Project (time-shifting of energy) will allow flexibility in accommodating future distributed energy growth."); MECO's Response to CA-IR-2.a (representing that in deciding on the size of the battery (15 MW), and modelling forecasted curtailment (power which cannot be accepted by the grid or the battery), MNEP incorporated the amount of new distributed generation forecasted by MECO); MNEP's Response to CA/MNEP-IR-3.a & b.

[275]See MECO's Response to CA-IR-19. MECO states that its "perspective is that this is a desirable location for utility-scale centralized generation. The Generating Facility is located on private land, zoned for industrial use, on the property neighboring the Maui Electric Moloka'i Generating Station at Pala'au.

27. With respect to the timing of the proposed Project, the commission notes that:

A. The proposed Project is expected to benefit from a $17 million allocation of the New Market Tax Credit, and the 30% ITC.[276] MECO states that "[a]ccording to MNEP, the price of the Project was reduced by the influx of the [NMTC] (approximately $17 million)."[277] If delayed, the proposed Project may not benefit from these tax credits.[278] In addition, based on the record, the NMTC may not be available for another project on Molokai.[279]

B. MNEP and MECO acknowledge that solar PV and battery prices may go down in the future.[280] However, MNEP represents that

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The close proximity of the Seller's facility and Pala'au plant results in a relatively short one-half mile 12.47 kV line extension providing a lower interconnection and construction cost, the short intertie line also minimizes the exposure and risk of outages due to trees, animals, or other external causes. Id.

[276]See Application at 2, 3; MNEP's Response to CA/MNEP-IR-9.

[277]MECO's Response to CA-IR-9.

[278]See MECO's Response to CA/MECO-SIR-1.a, -2.

[279]See MNEP's Response to CA/MNEP-IR-9 (stating, "[t]he census data that allowed Molokai to qualify for this NMTC has changed and Molokai is no longer deemed to be a 'Severe Distressed' non metropolitan census track. Accordingly, it would be really challenging for Molokai to be eligible for the NMTC for future projects.").

[280]See MECO's Response to CA-IR-9 (stating, "[a]lthough PV/BESS costs are currently forecasted to decline, such projections are uncertain and highly dependent on several factors that may change over time, including but not limited to industry

the prices for solar panels and batteries, alone, must drop significantly to offset loss of the NMTC.[281]

C. MNEP represents that since the PPA terms were negotiated, "batteries have increased in price" and "[solar] panels have become subject to a 30% import duty."[282] Pursuant to the PPA, MNEP bears the risk for cost increases.[283]

28. Subject to the conditions discussed below and adopted in this Decision and Order, the commission concludes that MECO's request to approve the PPA should be granted, subject to

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and market conditions, the future state of the Company's electric system and developing technologies."); MECO's Response to CA-IR-9.

[281]See MECO's Response to CA-IR-9.

In response to CA-IR-9, MNEP represented that "[t]he NMTC value for the first year of the project is $4.61 million[;]" "[t]he panels and batteries would need to drop by 4.571 million, after considering the ITC, to create a resultant cost of $3.2 million less to achieve a value equal to the NMTC[;]" and its "calculations show that the amount just [for] solar panels and batteries must drop [] just over 53%" to offset the NMTC. MECO's Response to CA-IR-9. MNEP subsequently provided updated information on the value of the NMTC, and explains that a letter from its NMTC consultant, Baker Tilly, "illustrates the reduction in value of the NMTC that the new lower corporate tax rate created." See MNEP's Response to CA/MNEP-SIR-1.c; see also "CA-MNEP-SIR-1.c" (filed under seal). The commission notes that although the value of the NMTC may have changed, the record continues to indicate that the price of project components would have to fall significantly to offset the value of the NMTC.

[282]MECO's Response to CA-IR-9.

[283]See, e.g., MNEP's Response to CA/MNEP-IR-8.e.

the conditions set forth in this Decision and Order. The commission thus concludes:

A. The purchased energy charges to be incurred under the PPA are just and reasonable, should help to insulate Molokai ratepayers from volatility of fossil fuel prices, and comply with HRS § 269-27.2(c).

B. The power purchase arrangements under the PPA are prudent and in the public interest. The PPA will help the State to achieve its RPS goals; reduce the State's reliance on fossil fuels; and reduce greenhouse gas emissions.

C. The commission concludes that the PPA offers numerous benefits, including: (1) pricing that delinks energy pricing from the price of fossil fuels; (2) bill savings for ratepayers; and (3) grid services to improve reliability.

2.

Conditions of Approval

The commission begins by discussing the conditions it adopts, followed by the Consumer Advocate's recommended condition that it declines to adopt.

29. First, the commission adopts as reasonable three reporting requirements for MNEP:

A. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of its calculation of the final costs and final expected return, along with the documentation to support those calculations, no later than sixty (60) days after the Commercial Operations Date of the Facility.[284]

B. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of invoices related to the engineering, procurement, construction, and maintenance associated with the Facility, including a fully executed Lease, no later than sixty (60) days after the Commercial Operations Date of the Facility.[285]

C. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of its annual income statements or annual results of operations related to the Facility that will allow the commission and Consumer Advocate to evaluate the comparability of the Project's actual results to MECO's analysis, no later than March 31 of each year, for the previous calendar year.[286]

In adopting these three conditions, the commission largely adopts the Consumer Advocate's recommendations, to which

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[284] See Consumer Advocate's SOP at 11-12; MECO's Reply at 5 (stating its non-objection).

[285] See Consumer Advocate's SOP at 18; MECO's Reply at 5 (stating its non-objection).

[286] See Consumer Advocate's SOP at 18-19; MECO's Reply at 6.

MECO and MNEP did not object. The commission finds it appropriate to require PPA amendments, and to include filing deadlines, related to these conditions.

The commission notes that MECO represents that MNEP "does not object to Recommendation #3 but recommends that such filings be made annually and limited to the first three years of commercial operation."[287] Based on the record, neither MECO nor MNEP state an objection to this condition of approval,[288] and MECO has not provided an explanation for why this reporting requirement should be limited to the first three years. The commission adopts as reasonable MNEP's recommendation that this requirement be filed annually, but declines to adopt MNEP's recommendation to limit the filings to the first three years of operations.

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[287]MECO's Reply at 6 (emphasis added).

[288]The commission notes that, according to MECO's Reply, "MNEP does not object to such reporting requirements so long as the delivery of such information to the Commission and Consumer Advocate does not result in an amendment to the PPA." MECO's Reply at 6. As stated above, these conditions of approval are reporting requirements. Although Conditions 1-3 do require amendments to the PPA, the required amendments impose reporting requirements only; and do not impose changes to other terms. See MECO's Reply at 6 (stating that "MNEP does not object to such reporting requirements so long as the delivery of such information to the Commission and Consumer Advocate does not result in an amendment to the PPA. MNEP states that its lenders require certainty with respect to the price and risk profile of the PPA, and therefore, to the extent the Commission agrees to require this documentation, MNEP respectfully requests that the Commission provide confirmation in its order that the PPA terms and pricing will not change as a result of providing these documents.").

In adopting these three MNEP reporting requirements, the commission notes that, as a non-public utility and a participant to the subject proceeding, MNEP voluntarily and knowingly agrees to abide by and comply with said conditions.

30. Second, the commission adopts as reasonable two conditions of approval relating to MECO's utilization of the Post Initial Energy Rate. MECO shall:

A. Take reasonable steps to maximize utilization of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers; and

B. File with the commission and Consumer Advocate quarterly reports that support the finding that MECO is taking reasonable efforts to take advantage of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers.

The Consumer Advocate recommends that MECO file reports, as described above, to which MECO does not object. The commission finds this condition of approval to be reasonable. However, the commission additionally finds it necessary to additionally require that MECO take affirmative steps to maximize utilization of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers. As reflected in the record, the levelized price of energy pursuant to the PPA could change depending on how the Project is dispatched. The commission shares the Consumer Advocate's concern that MECO dispatch its energy resources in a cost-effective manner, and expects MECO to "aggressively seek[ ] to lower customers' electricity bills, while still providing reliable, safe, and quality electricity services to Molokai residents and businesses."[289]

31. Third, as recommended by the Consumer Advocate: The PPA shall be modified to ensure that the liquidated damages associated with the BESS fully offset any BESS Services Fixed Payment, such that if the BESS is unavailable, and such failure is not due to a force majeure event, MNEP shall pay as additional liquidated damages the difference between any BESS Services Fixed Payment and any applicable liquidated damages related to the BESS Services.[290]

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[289]Consumer Advocate's SOP at 19; see also id. at 21 (stating, "the Consumer Advocate has recommended the reporting requirement regarding system dispatch review so that the Commission and Consumer Advocate will have evidence relating to the availability of resources as well as whether [MECO] is cost-effectively dispatching resources, such as the Project."). The commission notes that it appears that this type of report is part of a larger effort by the Consumer Advocate to seek assurances with regards to how the Hawaiian Electric Companies are dispatching resources. The Consumer Advocate states, it "has already inquired and discussed whether the Hawaiian Electric Companies are open to conducting reviews of how operators dispatched system resources to see if there were opportunities to dispatch the system more cost-effectively and/or to determine whether additional renewable resources could have been cost-effectively dispatched without affecting system reliability." Consumer Advocate's SOP at 20. The Consumer Advocate additionally states that "the Hawaiian Electric Companies have indicated that they have already engaged in such reviews." Id.

[290]See Consumer Advocate's SOP at 22-23.

The Consumer Advocate demonstrates that pursuant to Article 2.2(D) of the PPA, MECO ratepayers may be required to pay for BESS Services that are unavailable, "as the payments for the liquidated damages does not fully offset the BESS Services Fixed Payment[.]"[291] In its Reply, MECO states that both MECO and MNEP understand the Consumer Advocate's concern, and that

> MNEP is amenable to amending the PPA so that the relevant liquidated damages associated with the BESS be revised <u>such that if the BESS is unavailable for a full calendar year</u>, and such failure is not due to a force majeure event, then at the end of such year, MNEP shall pay as additional liquidated damages the difference between any BESS Services Fixed Payment made in such year and any applicable liquidated damages relating to the BESS services.[292]

While MECO represents in its Reply that MNEP does not object to amending the PPA, as indicated above, the commission notes that the statement is not entirely responsive to the Consumer Advocate's recommendation or concerns. The Consumer Advocate contends that the liquidated damages should <u>fully offset</u> the BESS Services Fixed Payment, and used a single calendar year as an illustrative example. Using a calendar year as the period of evaluation for offsetting the BESS Services Fixed Payment does not address the Consumer Advocate's concern. Under MNEP's offered language, if the BESS is unavailable for a period

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[291]Consumer Advocate's SOP at 23.

[292]MECO's Reply at 7-8 (emphasis added).

of time that does not cover a complete calendar year, ratepayers would still be paying for services they are not receiving if the BESS is unavailable for a period of time other than a full calendar year. Accordingly, the commission declines to limit the condition to a "full calendar year" period.

32. Fourth, the commission declines to adopt the Consumer Advocate's recommendation, related to the "evergreen provision," that the PPA should be amended "to allow the utility, if the purchase option is not pursued by a non-profit organization, to purchase the facility at remaining net book value from MNEP, with the possible addition of some additional reasonable value, if necessary."[293] The commission notes that MECO represents that MNEP "is not amenable" to this recommendation;[294] and does not voluntarily or knowingly concur with this condition. However, the commission does share the Consumer Advocate's concerns that an automatic extension of the PPA beyond the 22 year term, at prices in place at the end of the Initial Term, may not be fair or beneficial to customers.[295] In consideration of these concerns, the commission shall require the evergreen provision to be subject to certain notice requirements, as listed below.

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[293]Consumer Advocate's SOP at 30.

[294]MECO's Reply at 8.

[295]See Consumer Advocate's SOP at 29-30.

33. Fifth, the commission adopts as reasonable an additional reporting requirement for MECO:

The evergreen provision shall be subject to the following written notice requirements:

A. MECO shall file written notice with the commission and the Consumer Advocate at least one year prior to the 90-day advance written notice provision by which the contracting parties may terminate the PPA.

B. MECO, in its written notice, shall: (i) state whether it intends to extend the Initial Term of the PPA; and if applicable (ii) provide the basis for said extension.

3.

Issue 2

Whether MECO Has Met its Burden of Proof in Support of its Request for Cost Recovery Pursuant to the PPA

34. MECO seeks the commission's approval to recover the purchased energy charges and BESS fixed payments, and related revenue taxes that it incurs under the PPA in its ECAC and PPAC, as may be applicable, to the extent such costs are not included in base rates.[296]

[296]Application at 4. The commission notes that the Consumer Advocate does not object to MECO's request to include the payments and related revenue taxes that it incurs under the PPA in

35. HAR § 6-60-6(2), which states that "[n]o changes in fuel and purchased energy costs may be included in the fuel adjustment clause unless the contracts or prices for the purchase of such fuel or energy have been previously approved or filed with the commission."

36. Given the commission's overall approval of the PPA, the commission likewise approves MECO's request to recover the purchased energy charges and BESS fixed payments, and related revenue taxes that it incurs under the PPA in its ECAC and PPAC, as may be applicable, to the extent such costs are not included in base rates. Such a decision is consistent with HAR § 6-60-6(2), which authorizes the pass through of purchased energy charges through an electric utility's ECAC and PPAC; and with HRS § 269-16.22, which authorizes the pass through of power purchase costs through an electric utility's PPAC.

B.

Additional Observations & Guidance for Future Projects

In approving, subject to certain conditions and modifications, the PPA, the commission makes the following observations and provides the following guidance:

MECO's ECAC and PPAC, to the extent that those costs are not included in base rates. Consumer Advocate's SOP at 32-33.

1. In its Inclinations, the commission stated that it "views the objectives of lower, more stable electric bills and expanding customer energy options, while maintaining reliable energy service in a rapidly changing system operating environment, as essential principles that are the foundation for the future strategic business direction of the HECO Companies."[297]

The Consumer Advocate highlights MECO's decision not to conduct an independent assessment of the costs in MNEP's pro forma,[298] and states that it "expects all electric utilities going forward to use available cost benchmarks to compare against project component cost estimates provided in project pro formas, and to challenge developers on individual project component cost estimates during pricing negotiations when any one appears unreasonable high."[299] The Consumer Advocate additionally states that it:

> urges the Commission to insure that, as part of its review of any PPA or renewable resource applications, the review and approval of such applications provide clear and transparent language that sends a message to the utility companies and the developers that, while Hawaii is aggressively seeking to migrate towards its 100% RPS goals, it is not at any cost and that utility

[297]Inclinations at 3.

[298]Consumer Advocate's SOP at 17 (citing MECO's Response to CA/MECO-IR-SIR-5.

[299]Consumer Advocate's SOP at 19.

companies and developers should seek to bring reasonably priced projects before the Commission.[300]

The commission shares the Consumer Advocate's concerns. In future efforts to add new renewable generation, the commission expects that the HECO Companies will continue to seek ways to utilize competitive bidding, rather than sole source procurement, and to negotiate with developers in order to drive down costs for the benefit of ratepayers, to lower customer bills, and to increase renewable generation.

2. The commission similarly expects the HECO companies to continue to seek ways to engage with ratepayers and community members. The commission views communities that are engaged in discussions on energy planning as assets. Projects that are vetted by the community, responsive to community goals and concerns, and gain community support are likely to be improved in the process. The commission expects that the state's electric utilities, as well as third parties, will proactively and aggressively seek out opportunities to engage with community members early in the planning process, as well as throughout the planning process.[301]

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[300]Consumer Advocate's SOP at 19.

[301]The commission notes that the Smart Electric Power Alliance ("SEPA") selected MECO as a "2018 Power Player Finalist" for the "Visionary of the Year" award. SEPA states, MECO "[b]rings together grassroots community engagement, innovative utility solutions, creative customer options, and alternative financing possibilities for the residents of Moloka'i to transition the small island to all renewable generation as early as 25 years ahead of

VII.

ORDERS

THE COMMISSION ORDERS:

1. MECO's request to approve its PPA with MNEP, dated January 24, 2018, is approved, subject to the conditions set forth in this Order. Specifically, the commission:

A. Approves the PPA pursuant to HRS § 269-27.2;

B. Finds that the purchased energy charges and BESS fixed payments to be paid by MECO to MNEP pursuant to the PPA are just and reasonable; and

C. Finds that the purchased power arrangements under the PPA are prudent and in the public interest.

2. MECO's request to include the purchased energy charges and BESS fixed payments, and related revenue taxes that MECO incurs under the PPA in its ECAC and PPAC, as may be applicable, to the extent such costs are not included in base rates, is approved.

3. The following modifications and conditions shall apply to the commission's approval of the PPA:

A. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of its

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the Hawai'i state goal." SEPA Power Players 2018 Power Player Finalists, available at https://sepapower.org/community/awards/sepa-power-players/finalists/.

calculation of the final costs and final expected return, along with the documentation to support those calculations, no later than sixty (60) days after the Commercial Operations Date of the Facility.

B. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of invoices related to the engineering, procurement, construction, and maintenance associated with the Facility, including a fully executed Lease, no later than sixty (60) days after the Commercial Operations Date of the Facility.

C. The PPA shall be modified to require that MNEP shall file with the commission and Consumer Advocate copies of its annual income statements or annual results of operations related to the Facility that will allow the Commission and Consumer Advocate to evaluate the comparability of the project's actual results to MECO's analysis, no later than March 31 of each year, for the previous calendar year.

D. MECO shall:

(1) Take reasonable steps to maximize utilization of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers;

(2) File with the commission and Consumer Advocate quarterly reports that support the finding that MECO is taking

reasonable efforts to take advantage of the Post Initial Energy Rate in order to reduce the overall cost of energy to customers.

E. The PPA shall be modified to ensure that the liquidated damages associated with the BESS fully offset any BESS Services Fixed Payment, such that if the BESS is unavailable, and such failure is not due to a force majeure event, MNEP shall pay as additional liquidated damages the difference between any BESS Services Fixed Payment and any applicable liquidated damages related to the BESS Services.

F. The evergreen provision of the PPA shall be subject to the following written notice requirements:

(1) MECO shall file written notice with the commission and the Consumer Advocate at least one year prior to the 90-day advance written notice provision by which the contracting parties may terminate the PPA.

(2) MECO, in its written notice, shall: (A) state whether it intends to extend the Initial Term of the PPA; and if applicable (B) provide the basis for said extension.

4. Subsequent to MECO filing (A) the amended sections of the PPA in the docket; and (B) the Supplemental IRS, this docket shall be closed, unless ordered otherwise by the commission. Nevertheless, the filings required pursuant to Ordering Paragraph No. 3, above, shall be filed in this docket.

DONE at Honolulu, Hawaii JUL 30 2018.

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By ______________________
Randall Y. Iwase, Chair

By ______________________
James P. Griffin, Commissioner

APPROVED AS TO FORM:

____
Jessica R. Freedman
Commission Counsel

2018-0053.ncm

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of)) MAUI ELECTRIC COMPANY, LIMITED)) For Approval of Power Purchase) Agreement for Renewable) As-Available Energy and Electric) Services with Moloka'i New Energy) Partners, LLC.))	Docket No. 2018-0053

CONCURRING OPINION OF JENNIFER M. POTTER, COMMISSIONER

I respectfully concur with the Majority's decision, but have the following concerns regarding the Project, as set forth below.

As discussed in the Majority's decision, the Project (1) will provide some grid services from the BESS, which have the potential to improve reliability and minimize the need for additional generation to respond to grid events and system disturbances; (2) timely takes advantage of the NMTC and ITC, which have limited availability; and (3) will help the State move towards achieving its RPS goals, reduce reliance on fossil fuels, and reduce greenhouse gas emissions.

However, despite these benefits, I have the following concerns:

1. Under the terms of the PPA, MECO may not be able to purchase the amount of energy at the Post Initial Energy Rate proposed in the Application. As a result, the "levelized cost" of \$0.18 per kWh is likely too low of an estimate.[1] Given the current PPA and constraints on the operations of the Project, it is unlikely that MECO will purchase more energy at the "Post Initial Energy Rate," and thus the power purchases from this Project will likely cost more than what was assumed in the Application.

2. MNEP and MECO agreed to a Project size that does not trigger the Competitive Bidding Framework.[2] I have reservations about this Project not being competitively bid, and believe that a more cost-effective PPA may have resulted from a competitive bidding process. While the contracting Parties agreed to size the Project so as not to trigger the Competitive Bidding Framework, this may negatively impact customers, as they may not fully benefit from the energy produced by the system. Furthermore, the proposed system has the potential to be underutilized given

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[1]"Application; Exhibits 1-7; and Certificate of Service," filed on March 7, 2018 (collectively, "Application"), as supplemented by the documents filed under confidential seal pursuant to Protective Order No. 35368, filed on March 27, 2018.

[2]MECO's Response to CA/MECO-SIR-1, at 3, filed on June 12, 2018.

the current capacity cap operating constraints of 2.64 MW and contractual cap on annual electricity sales.[3]

3. The fixed price, monthly payment contract, and the resulting total cost for the BESS is significantly higher than recent pricing for comparable technology. MECO has agreed to fixed payments for the BESS in the Project application that total \$34,623,337.[4] While storage systems present a unique challenge when categorizing costs, recent industry and academic research, as well as experience from projects actively deployed or under development in Hawaii, indicate that the capital cost for this project is high.[5] Even assuming land, permitting, and interconnection costs for this Project that are dramatically higher than normal, this should not result in such high fixed payments for the BESS.

4. It is not clear that the Project will be providing grid services above and beyond the inherent capabilities of other comparable BESS, such that the higher costs are fully justified. MECO asserts that the costs of this Project should not be compared

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[3]Application, Exhibit 1 ("PPA"), Article 2.15 at 37.

[4]PPA at J-1-2 (Table J-3). Total BESS Services Payments are expressed in nominal dollars.

[5]See Zakeri B., Syri S., "Electrical energy storage systems: A comparative life cycle cost analysis." Renew. Sustain. Energy Rev. 2015: 42:569-96.

to similar PV + storage projects in Hawaii and elsewhere because the Project will provide grid services that are unique and will require inverters that are costlier. However, most BESS similar to the one proposed for this Project are designed to provide grid services, and the communication software, controls, and inverters for BESS are commonplace and deployed across Hawaii and the world. Even residential systems have inverters and control technologies that permit remote dispatch for grid services; these systems are actively being deployed throughout the State. Utilities throughout the country, including Pacific Gas and Electric, Southern California Edison, Green Mountain Power, Xcel Colorado, National Grid, and NV Energy, have all deployed or will deploy grid scale batteries to take advantage of their capability to provide grid services. One of the main reasons that these utilities are deploying grid scale BESS is because they inherently have these capabilities.

Thus, while I concur with the Majority's decision, subject to the conditions set forth therein, I also express these concerns to guide and inform the Hawaiian Electric Companies' future PPA applications.

DONE at Honolulu, Hawaii JUL 30 2018.

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By Jennifer M. Potter
Jennifer M. Potter, Commissioner

2018-0053.ljk

CERTIFICATE OF SERVICE

The foregoing order was served on the date of filing by mail, postage prepaid, and properly addressed to the following parties:

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